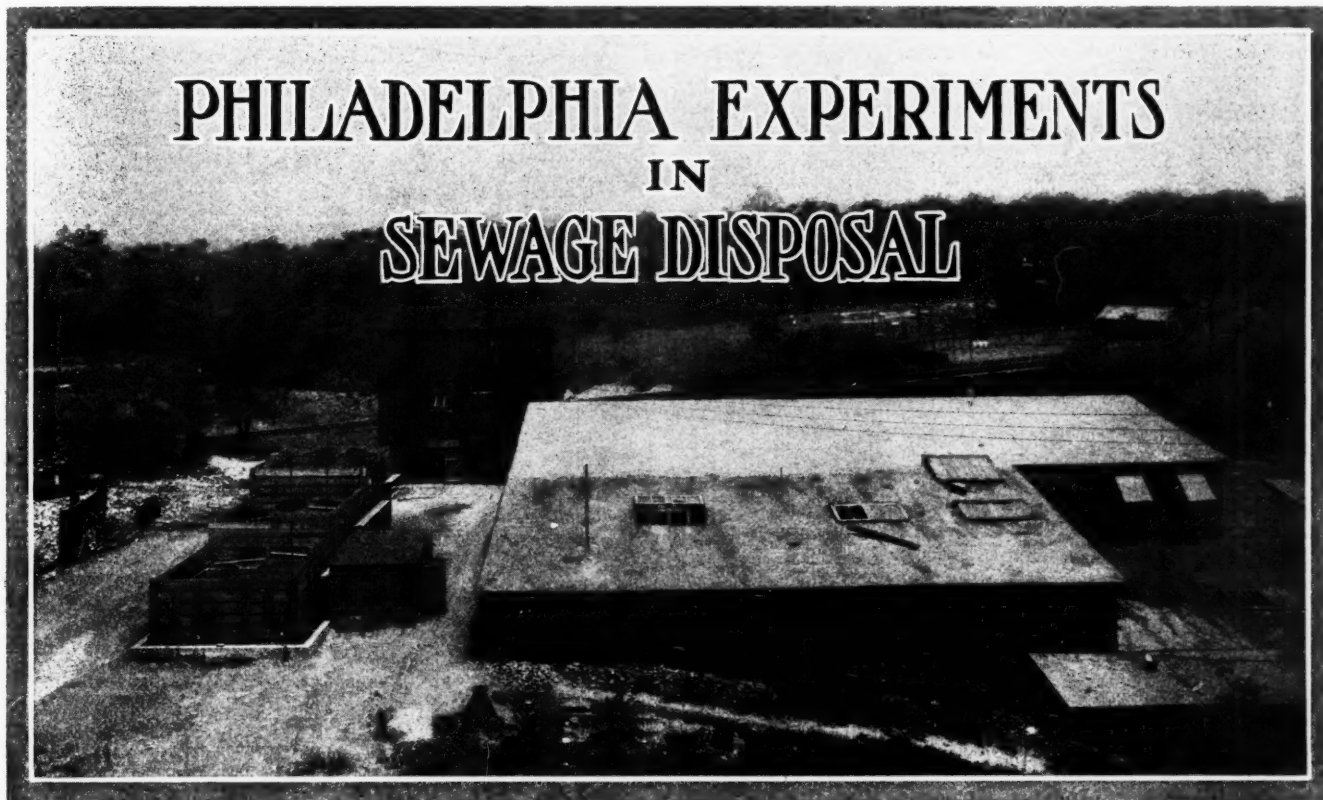


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No. 17.



GENERAL VIEW OF SPRING GARDEN EXPERIMENT STATION, EXPERIMENTAL SPRINKLING FILTERS AT LEFT

THE last few years have seen the establishing in this country of several testing stations for experimenting on the various methods of sewage purification which have been developed to a practical point. The first for studying the problem in a manner and to an extent at all comprehensive was that maintained by the Massachusetts State Board of Health at Lawrence, Mass., which began operation in 1887, published a report which was a summary of its work to date and immediately took its place as a classic, and which is still being operated. In 1903 an experimental station was provided for by a friend of the Massachusetts Institute of Technology, to be conducted as a feature of that Institute, and many excellent papers by Professors Winslow and Phelps and other experimenters at this station have been made possible by its establishment. This experimental plant also is still being operated. In 1904 and 1905 the city of Columbus, O., carried on, through expert engineers, chemists and bacteriologists, a series of experiments which were of the greatest value, especially in working out the possibilities of sprinkling filters in the United States. A synopsis of the report giving the results of this investigation was published in the MUNICIPAL JOURNAL about three years ago. At Waterbury, Conn., also a municipal experimental station was operated in 1905, 1906 and 1907. In Baltimore, Md., experiments on sewage purifi-

cation were begun in 1906 and continued for about two years, and the present operation of a small plant may be said to be a continuation of these experiments. Gloversville, N. Y., inaugurated similar experiments in 1908, and this plant is still running. In the same year the city of Philadelphia, Pa., began in a most thorough way to study the subject of sewage purification, and these tests will probably continue for some time to come. At Chicago, Ill., a large experimental station is now being established under the direction of Mr. George M. Wisner, Chief Engineer of the Sanitary District of Chicago.

The testing station at Philadelphia is known as the Spring Garden Testing Station. At the present time this station has only few figures for publication, as it has been operated only since March of this year, under summer conditions, and a complete cycle of seasons is required for deciding most of the questions involved in sewage disposal, especially those relating to bacterial action at all stages and to the effect of frost on sprinkling beds. But a few almost final conclusions have been reached. Contact beds have been practically eliminated, so far as the summer season is concerned, and must show an unexpected superiority during winter if they shall regain consideration. Gravel and fine cinders have been rejected as materials for permanent filters, as more explicitly referred to hereafter. Some improvements have been devised in control apparatus,

which are of direct and immediate interest. Peculiarities of slate bed action, of great interest where slate is cheap, have been determined.

In 1900 the Bureau of Surveys constructed an experimental station for an examination of water filtration processes, which has not been in use since the filtration work was completed. An appropriation having been made for experimental work upon the question of sewage disposal, the Bureau of Surveys refitted the station mentioned above for this purpose. It has been in operation since March 23 of this year, under the supervision of the Bureau of Surveys.

The crude sewage used for the testing station is obtained from a 4-foot 6-inch intercepting sewer receiving domestic sewage mainly from Roxboro and Germantown and trade wastes mainly from the Manayunk district. Paper mills, shoddy mills and two breweries discharge waste into this sewer, and wool, hops and paper are among the resistant materials usually found suspended in the sewage. It is frequently streaked with the colors of dye waste, but the acids are more than neutralized by the domestic sewage, and the sewage is always alkaline. The sewage is tapped at the old pumping station and is raised from the pump well to the testing station through a 4-inch cast-iron force main.

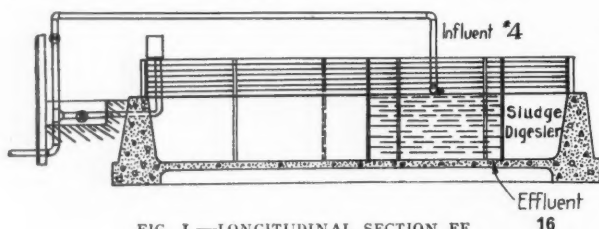


FIG. 1.—LONGITUDINAL SECTION EF

The general plan of the station is to submit crude sewage to all of the prominently advocated processes for purification, each of which involves the separation of sewage into its solid and liquid components; to investigate the nature of the solids in each instance and thereby arrive at conclusions as to what can or should be done with them; also to investigate the nature of the more or less purified liquids, which are customarily discharged into stream, lake or sea, and to decide to what extent each kind of liquid may be so discharged without causing pollution. In these investigations time is an element of the highest importance, because solids and semi-solids full of bacteria and other microscopic life undergo important transformations when left untreated, and liquids more or less contaminated undergo other but less pronounced changes when diluted and carried in a large body of relatively pure water. Temperature is another element requiring observation, both separately and in conjunction with time.

Given this scope of work, the determinations to be made are numerous and complicated and necessitate a rigorous system to avoid confusion in the laboratory where samples from different stages in the various processes are subjected to chemical analysis and to microscopical and bacteriological tests. By a system of sampling stations, numbered from 1 to 59, and the use of brown, blue, salmon, red, yellow and white cards, the stubs of which are attached to sample bottles, the laboratory work is brought

CITY OF PHILADELPHIA BUREAU OF SURVEYS SPRING GARDEN TESTING STATION																			
SANITARY CHEMICAL ANALYSIS										PARTS PER MILLION									
SERIAL NO.	STATION NO.	SOURCE	PERIOD OF COLLECTION				DATE	COUNTED BY	ANALYZED BY	TEMP. AIR °C				TEMP. WAT. °C				OXYGEN CONSUMED	
			Year	Mon.	Day	Hour	Min.			Max.	Min.	Avg.		Max.	Min.	Avg.			
SUSPENDED SOLIDS																			
Nitrogen										Oxygen Consumed									
Total										Total									
Filtrate										Filtrate									
Total										Total									
Total										Total									
Total										Total									

FIG. 3.—RECORD CARD FOR CLASSES 50 TO 59, WHITE

into readily identified relations with the processes under observation; each color representing a specific process. Some of the numbers in each division of ten are purely schematic, of course, being reserved for sections which may be established later.

The following schedule of the processes under observation at the Spring Garden Testing Station, in connection with the accompanying floor plans and sections, gives a preliminary idea of the important data which the station is collecting:

Processes Under Observation at Spring Garden Testing Station

September, 1909

Preparatory Processes: 10 to 19.

- Screening.
- Sedimentation of crude sewage.
- Sedimentation of screened sewage.
- Sedimentation of crude sewage, combined with sludge digestion in an Emscher tank.
- Treatment of crude sewage in a slate contact bed.

Oxidizing Processes: 20 to 29.

- Sprinkling filters, comprising 6 outdoor beds using settled sewage, 1 upper indoor bed using crude sewage, and 1 lower indoor bed using effluent from settling basin for screened sewage.

- Contact system, composed of a sedimentation basin, dosing tank, primary (slag) contact bed and secondary (clinder) contact bed.

Finishing Processes: 30 to 39.

- Sedimentation of effluent from upper sprinkling filter.
- Sedimentation of effluent from lower sprinkling filter.

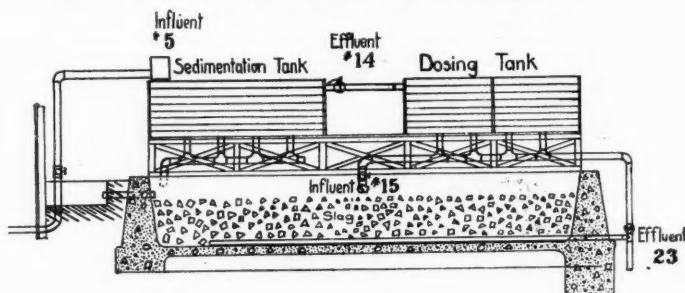


FIG. 2.—LONGITUDINAL SECTION CD

Disinfection Processes: 40 to 49.

- Disinfection of screened, settled, screened and settled sewage, and of the effluents from the indoor sprinkling filters.

Dilution Processes: 50 to 59.

- Raw Schuylkill River water mixed in varying proportions with any of the following: Crude sewage, screened sewage, screened and settled, any of these disinfected, effluents from upper and lower sprinkling filters, raw, settled or disinfected.

Sludge Disposal:

- Phenomena of sludge digestion followed in digestion basins, earth lagoons and furrows.

DESCRIPTION OF STATION

Tracing the connections of the sewage supply force main on the charts, it is seen that crude sewage is discharged, first, into a sedimentation tank, 18 ft. long, 8 ft. wide and 4½ ft. deep, connected with a tank to receive the effluent. Here the amount of sludge deposited in a given time is the chief subject for study. The second outlet for crude sewage connects with the sedimentation tank for the contact beds. The third supplies crude sewage for the slate contact bed. The supply is in all cases through orifice boxes measuring the amount of sewage used. The fourth outlet leads to the old sedimentation basin, No. 13, formerly used for experiments with the water supply. This is 10 ft. deep at the end where sewage is received and 4 ft. at the other end, so as to keep the sludge at one end and obviate septic action at the outlet end to the injury of the effluent. For the same purpose, upper and lower baffles run across the middle portion; and, if sludge accumulates in the shallow end, it is pumped back to the deep portion. (See Fig. 8.)

The fifth outlet for crude sewage leads to the screening tank, where the liquid is played through a series of nozzles, about 3/8-inch diameter, against a conical 35-mesh screen. The screenings are drained away and are not subjected to observation, being of small interest except perhaps locally, but the screened sewage is piped through an orifice box to the sedimentation basin for screened sewage. The sixth outlet admits the crude sewage to the constant-head dosing tank, with float regulator, from which the upper sprinkling filter bed, No. 21, is supplied. The seventh outlet admits crude sewage to sedimentation tank No. 3, in which a constant head is maintained by a float-regulated electric connection with the pumping station.

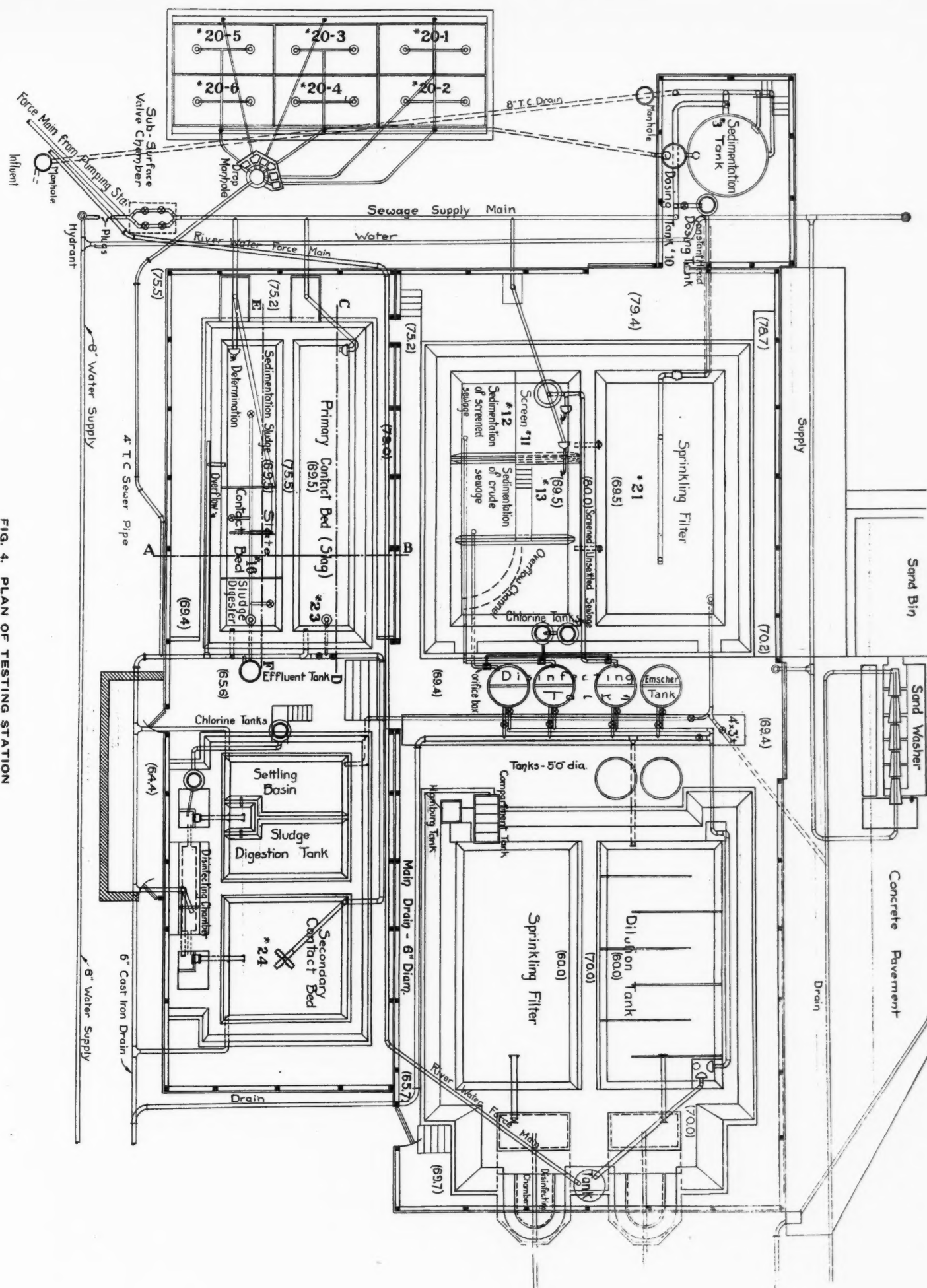
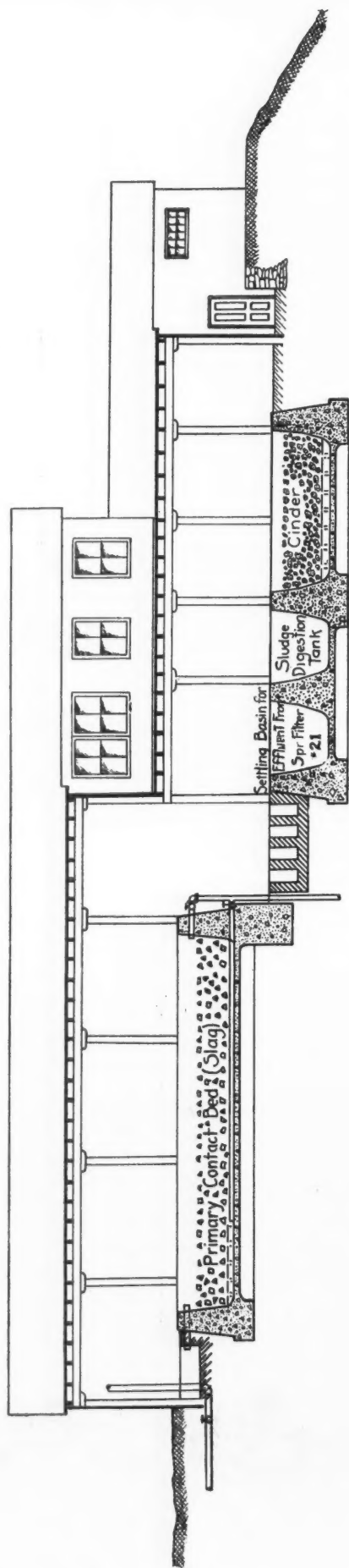
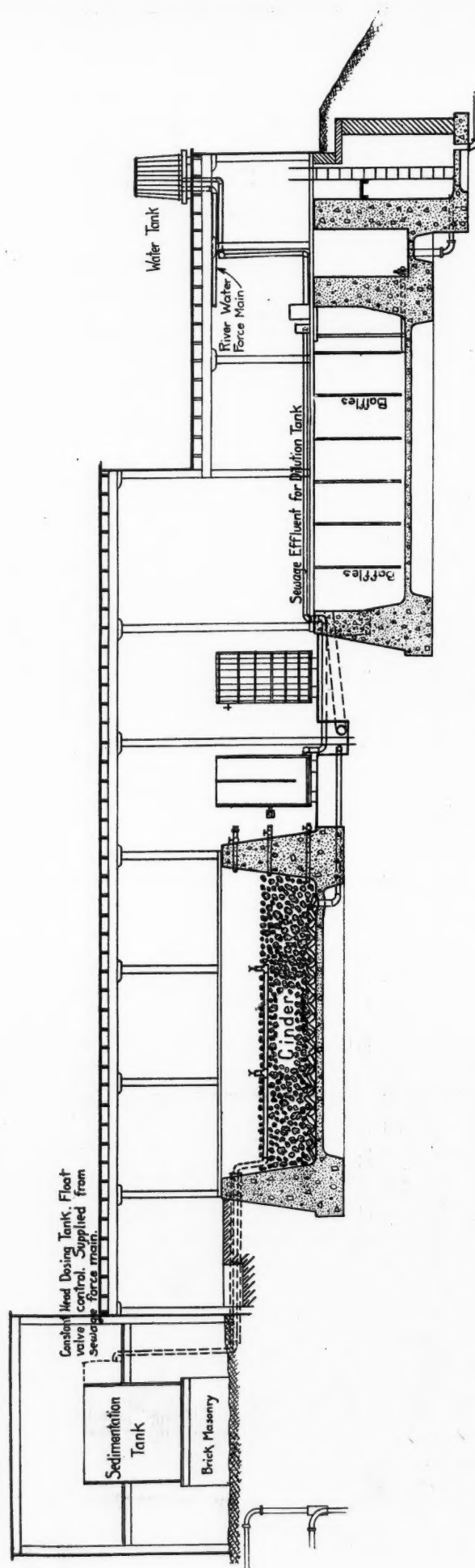


FIG. 4. PLAN OF TESTING STATION



SECTION THROUGH ANNEX



SECTION THROUGH MAIN BUILDING

FIG. 5. VERTICAL SECTIONS THROUGH BUILDING AND PLANT

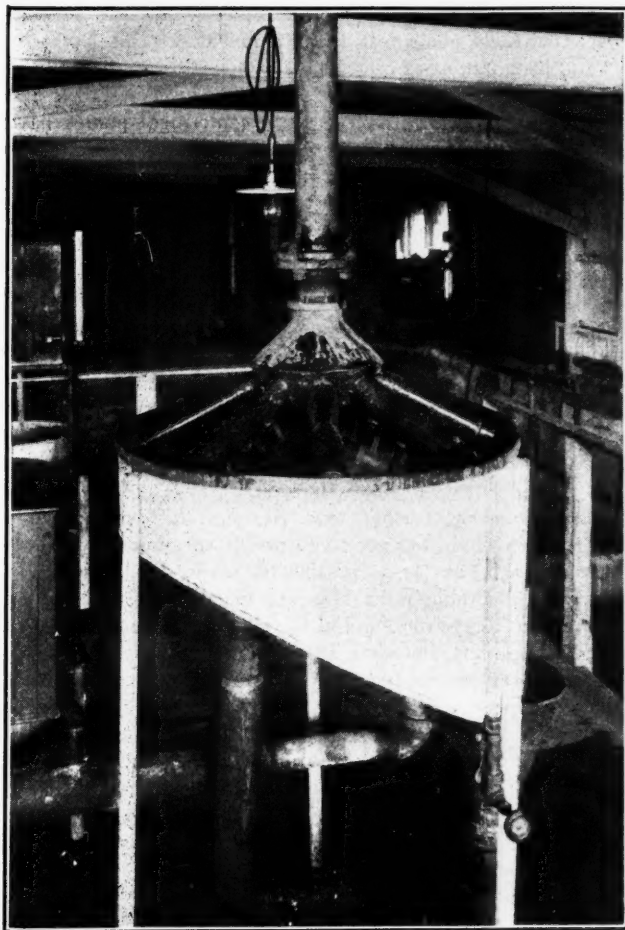


FIG. 6.—SCREENING TANK IN OPERATION

A sampling pipe also is provided, from which samples of force main sewage are collected every half hour, to be analyzed at the end of each day.

The settling tank, No. 3, delivers settled sewage to the

dosing tank, No. 10, from which six out-door sprinkling filters are supplied. Provision is made for obtaining properly settled sewage for this purpose by the arrangement of baffles shown in Fig. 7. The box surrounding the outlet pipe extends about one foot down from a few inches below the surface of the liquid in the tank, while the oblique baffles extend from slightly above the surface and two feet down.

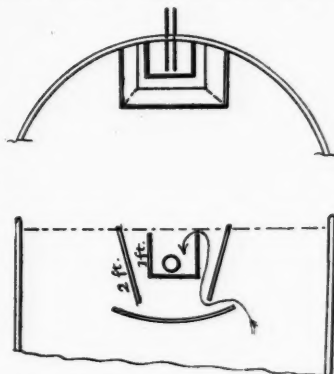


FIG. 7.—PLAN AND VERTICAL SECTION OF BAFFLES IN SEDIMENTATION TANK NO. 3, SUPPLYING SETTLED SEWAGE FOR OUTDOOR SPRINKLING FILTER.

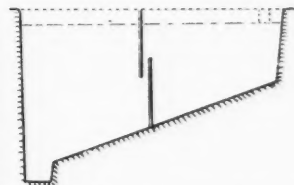


FIG. 8.—SECTION OF SEDIMENTATION BASIN FOR CRUDE SEWAGE NO. 13, FLOW FROM LEFT TO RIGHT.

The dosing tank, No. 10, is provided with an intermittent-action float valve, alternately closing and opening the inlet from tank No. 3 and the outlet to the sprinkling filters, No. 20-1 to 20-6, thereby producing rest periods in the spraying of these filters, which are six in number, each 0.002 of an acre in area, or 87 square feet. They vary in depth and in the size and kind of the filtering media, as given in tabular form herewith:

Outdoor Sprinkling Filters				Depth of Underdrain
Filter	Medium	Size of Medium	Depth	
20-1	Limestone	3/4 in. to 3 in.	7 ft.	1 ft.
20-2	"	2 1/4 " " 4 "	8 "	1 "
20-3	Slag	1 " " 3 "	5 "	1 "
20-4	Trap	1 " " 3 "	6 "	1 "
*20-5	"	1 " " 3 "	3 " 3 in.	9 in.
20-6	"	1 1/2 " " 2 1/2 "	4 " 3 "	9 "

*This filter was operated with gravel at first, but the effluent was found putrescent and gravel was discarded as inefficient.

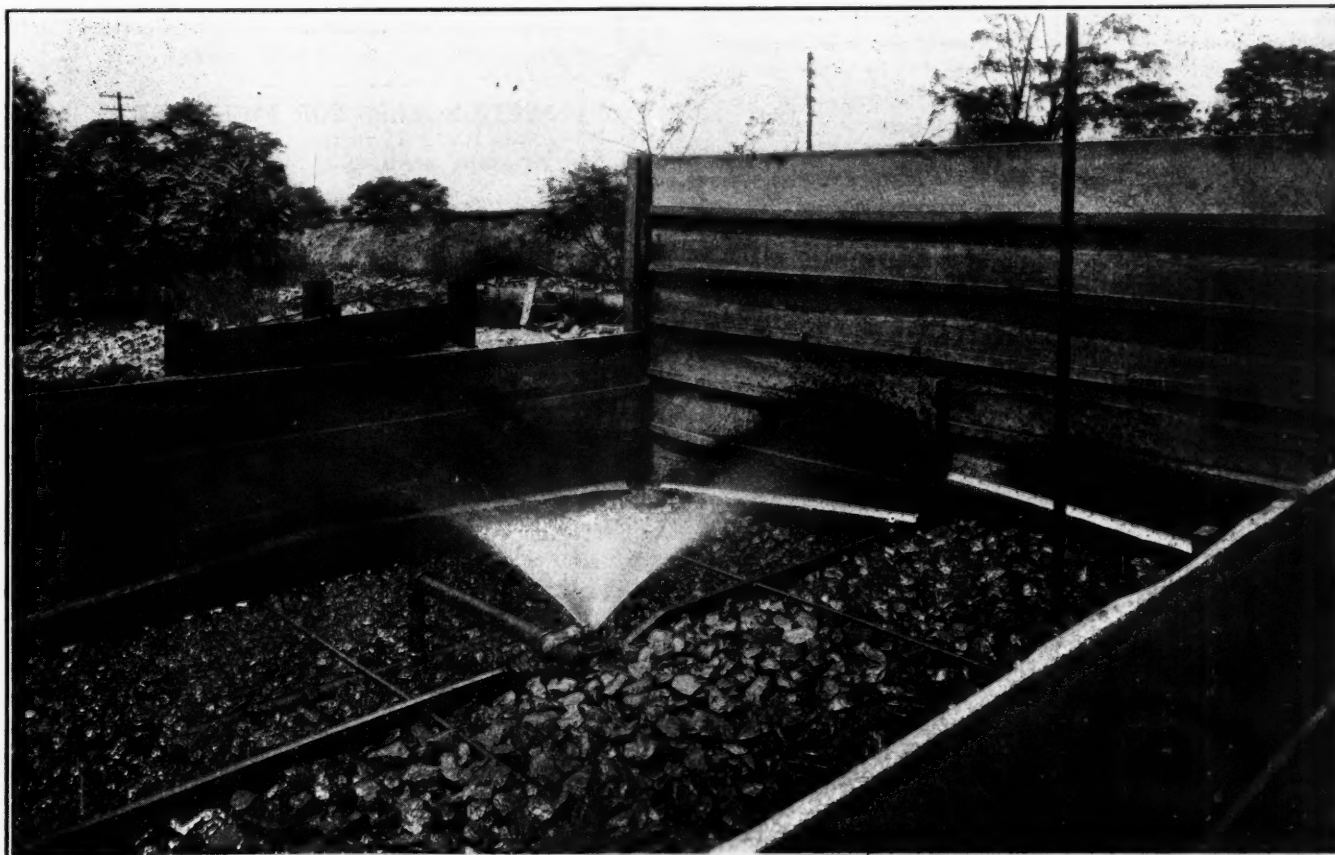


FIG. 9. OUTDOOR SPRINKLING FILTERS NOS. 20-1 AND 20-2. COLUMBUS NOZZLE

These six beds are sprayed at present by means of 3 Columbus nozzles conveniently at hand, and, as the distribution is not uniform owing to the shape of the beds, the surplus liquid which hits the sides is gathered in gutters and drained to the corners, as shown in Fig. 9. Lateral drains have been placed in the beds at one-half of their depth, in each case, to permit of studying the effluents at these points and comparing them with the effluents from the underdrain which are gathered in cement sampling chambers in the floor of a shed adjoining the filter beds.

As the sides of these filter beds are built of planks and considerable aeration takes place through the crannies, the observations relating to the effluents are mainly of value for mutual comparison. The same feature in the construction renders it impracticable to measure the voids or air space in the entire volume of the media and the degree of sediment accumulating by use of the filters or removed by flushing them.

The upper indoor sprinkling filter, No. 21, has been operated with crude sewage sprayed through two Reading nozzles over 6 feet of clean clinkers with an underdrain of one foot. Here the effluent, which was piped to the settling basin, No. 30, in the Annex, proved much "too good"; and the filter was discontinued, not on account of the good effluent, but because the fineness of the medium produced such clogging as to render it uneconomical.

(Concluded next week)

ADVANTAGES OF CENTRIFUGAL PUMPS

THE advantages of the modern centrifugal pump over other types was clearly and concisely stated by Mr. J. D. Berg, in a paper before the Central States Water Works Convention, as follows:

"In the first place, a centrifugal pump is simple in construction. It consists fundamentally of only a shaft, two bearings, and one or more impellers mounted on the shaft. This, with its flexible couplings and driving apparatus, makes up the complete machine. On account of its simplicity of construction and the fact that it attains its results entirely by rotary motion as opposed to reciprocating motion, its management is not difficult, and with a very little bit of study its construction is soon understood. The first cost of installation, not only of the machine itself, but of the foundations and buildings necessary, is always considerably less than that of other pumping machinery which is capable of the same economy. Absence of large-sized packing and the necessity of frequent packing; the small cost for lubrication; the small cost of repair parts; minimum cost for attendance, and labor for making repairs; these considerations, while they may not necessarily mean that the centrifugal type of pump is the one to install in all cases, are sufficient at least to warrant a full investigation of this type of apparatus before the installation is made.

"In the early days, before the introduction of high-speed, economical driving apparatus, the use of centrifugal pumps was restricted to conditions of low lift, of from 10 to 60 feet. Inasmuch as in water works for towns and mills, heads varying from 100 to 700 feet must be produced, it can easily be seen why the centrifugal pump was not a matter of interest to water works and mill engineers except in cases of low lift, filtration or condenser work. However, with the introduction of the steam turbine and reliable, high-speed motors, this condition has ceased to exist, and centrifugal pumps have, in a measure, 'come into their own' and merit the attention of these engineers. This has been the case to such an extent that it has been found profitable to manufacturers to develop this type of pump by the employment of first-class engineers and by exhaustive experiments."

The author states that a centrifugal pump is now being built to lift one million gallons a day against a head of 1400 feet. A city of New York State will shortly place in service two pumps, each (we believe) of a capacity of 4,000,000 gallons a day against a head of 285 feet, one centrifugal, the other horizontal crank and flywheel. The guaranteed duty of the latter is much

the higher, but the lower cost of installation and maintenance of the centrifugal pump was thought to balance this.

Several installations of centrifugal pumps for fire service have been made in the last year or so, notably in New York and Chicago. A field where motor-driven centrifugal pumps have been used to good advantage is in supplementing pressure for high service districts. In such a case the pump adds to the pressure already existing at the suction end that due to the energy imparted by its impeller.

CHECKING WATER LEAKAGE

IN adopting meters for checking leakage and waste of water it is quite generally assumed that the meters will act automatically; that is, that the moral effect of the knowledge that all water is being measured, together with the meter readings as given on the quarterly bills, will be sufficient inducement to consumers to cut off all waste and repair leaking fixtures. Certain Water Works Superintendents, however, realize the desirability of going somewhat further than this and of demonstrating their desire to retain the good will of the consumer and to co-operate with him as far as possible in saving him money. In Wyoming, O., although the bills are made out quarterly, the meters are read monthly, and the consumer is informed if an unusually large meter reading shows an apparent leak or waste during the previous month, thus affording him an opportunity to correct the same before the additional expense has continued for a full quarter. In Wabash, Ind., the same practice in connection with the larger consumers is found advantageous. No entry on the books is made of these monthly readings. In Kent, O., bills are rendered on the first of every month, but readings are taken of the large meters on the fifteenth also. These intermediate readings have a direct value to the company, in addition to the warning which it enables them to give the consumer, and the lessening of disputes concerning large bills which are almost sure to ensue where there is leakage or waste of water going on in that these monthly readings also permit the detecting of meters which are running slow or fast. It being stated in Wyoming that there is hardly a month but an instance of this is discovered. Also, where the consumption is running close to the limit of the reservoir or pumping capacity, it is possible by frequent readings not only to find out where a leak or waste exists, but to check it as soon as possible; and this is greatly facilitated by the monthly readings.

SECTION MAPS FOR FIELD USE

By JOHN McNEAL, M. Am. Soc. C. E.,

City Engineer of Easton, Pa.

MAPS and profiles are, as a rule, found inconvenient for field use, and in localities where new survey data are likely to be needed by the surveyors after they have left the office it is not always convenient to carry sufficient information in the form of maps to provide for other than the work at hand.

In order to condense the data of this city (Easton, Pa.) to be prepared to give information of any kind in connection with the street lines and grades without a return to the office, a book of section maps of the entire city, drawn to a scale of 200 feet to the inch, has been prepared.

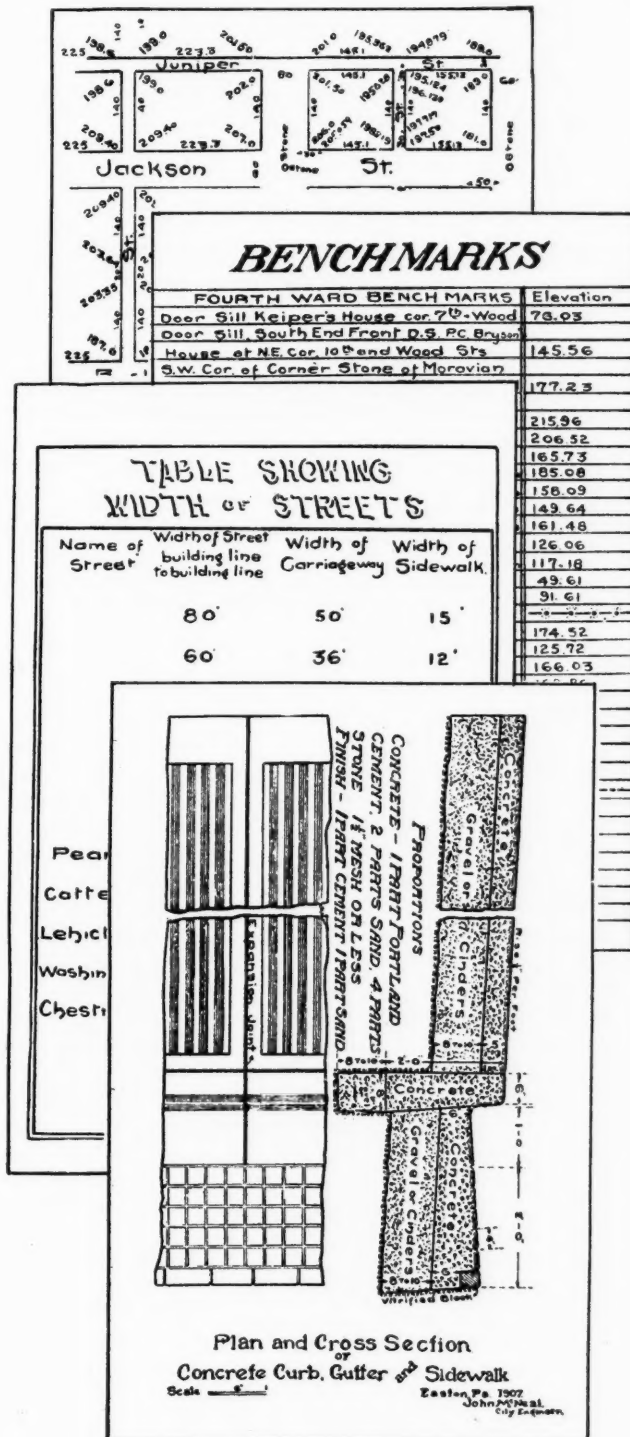
These maps are 6¾ inches by 4¼ inches in size. Tracings were first made, and from these blueprints were prepared which were bound into books with flexible leather covers. The tracings themselves were not bound, but were kept in loose sheets in order to make other blue prints when necessary. Each book contains about 100 pages and can be carried comfortably in the pocket. Duplicate books were made to be used by several field parties when needed.

All the maps were indexed for easy reference, and to the street and grade maps were added such others as referred in any way to street information, as width of roadways and sidewalks, curb, gutter and sidewalk construction, bench-marks, etc.

The accompanying illustrations show samples of the maps. index and cross-section of curb, gutter and sidewalk.

FIRE LIMITS

The custom is common throughout the country of fixing by city ordinance fire limits, within the boundaries of which no building or extension may be erected which does not meet certain specified conditions as to fire resistance. The area of such district relative to the total area of the city, however, varies considerably in various cities. A committee of Providence, R. I., which has been considering the revision of the lines of the fire district of that city, has found that such districts comprise about 30 per cent of the entire city areas of San Francisco and Springfield, Mass.; about 25 per cent of the area of Newark, N. J., and Cincinnati, O.; about 15 per cent of the area of Minneapolis, and 10 per cent of those of Cleveland and of Detroit. Providence's district, however, covers but 2.63 per cent of the entire area of the city. In the light of these figures the aim of the committee to extend the area of the fire district would certainly seem to be in order.



SECTION MAPS FOR FIELD USE

EXPIRATION OF CAMERON PATENT

A STATEMENT has been received from Mr. H. D. Wyllie, general manager of the Cameron Septic Tank Company, in which the claim is made that the Cameron patent does not expire next month, as has been generally stated, but that a recent decision of a Circuit Court of Appeals extends its life for seven years longer. An appeal to the United States Supreme Court or other litigation will probably be required to definitely settle this point. The statement is as follows:

The statement has been frequently made that United States patent No. 634,423, covering the septic process, granted to Messrs. Cameron, Commin and Martin, and now owned by the Cameron Septic Tank Company, of Chicago, Ill., expires in November, 1909. The patent in question was issued Oct. 3, 1899, for seventeen years, and has, therefore, now seven years to run. The statements above referred to probably had for their origin the fact that the original British patent, granted in November, 1905, for fourteen years, expires next month, and it has probably been assumed that the life of the United States patent was limited thereby.

By the convention concluded at Brussels, December 15, 1900, by the international conference for the protection of industrial property, at which the United States was represented, it was among other things ordained:

"Art. 4 bis. Patents applied for in the different contracting states by persons admitted to the benefit of the convention under the terms of Articles 2 and 3 shall be independent of the patents obtained for the same invention in other states, adherents or non-adherents to the Union.

"This provision shall apply to patents existing at the time of its going into effect.

"The same rule applies in the case of adhesion of new states to patents already existing on both sides at the time of the adhesion."

The provisions of this treaty were duly ratified by the Senate, proclaimed by the President of the United States, and thereby became the law of this country. In *United Shoe Company vs. Duplessis Shoe Company*, 155 Fed., 842, however, it was held by the court of appeals of the first circuit that although Art. 4 bis on its face was self-executing, it was controlled by implication by the Act of March 3, 1903, in which the clause making this provision of the treaty retroactive was omitted.

This construction of the treaty is probably responsible for the statements that have been made regarding the premature expiration of the Cameron patent. A decision of the U. S. Circuit Court of Appeals in Philadelphia, however, recently handed down in *Hennebique Construction Co. vs. Myers*, by Judge Archbald, holds that the treaty of Brussels was self-executing and freed all United States patents existing at the time it went into effect from the limitation of their terms by reason of prior foreign patents; under this decision the Cameron patent in the United States is independent of the earlier British patent, and will not expire until Oct. 3, 1916.

The following excerpts from Judge Archbald's opinion require no comment:

"This convention (at Brussels) was additional to that similarly concluded at Paris, March 30, 1883, to which the United States was not originally a party, but subsequently gave its adherence; and was ratified by the Senate March 7, 1901, and proclaimed by the President August 25, 1902, to go into effect September 14 following. 32 Stat., 1936. Taken as it reads, it provides for the absolute independence of previously interdependent domestic and foreign patents * * *."

"Without further discussion, therefore, it is clear that Article 4 bis, having been duly ratified by the different states represented in the conference, in the form in which it now appears, must be taken as it reads, according to which the dependence of domestic on foreign patents for the same invention, previously granted abroad, is entirely removed and done away with. And this is to be interpreted liberally. As resolved by the convention of Turin, in September, 1902, a few days after the treaty went into effect in the United States: 'The independence of patents proclaimed by the additional Act of Brussels ought to be construed in the broadest terms, and particularly in such manner that the term of a patent shall not in any case be dependent upon the term of another patent.' Nor is this to be confined, as conceived by our delegates, to such subsequent incidents as nullities and lapses by reason of the non-payment of renewal fees or non-working, an attempt to so limit it having been expressly disapproved by the conference. And it having been in terms provided that the Article should 'apply to patents in existence at the time of its being put in force,' subsisting patents, including the one in suit, were freed from their previous dependency, equally with those granted afterwards, no saving distinction being made between them."

"In the United Shoe Company vs. Duplessis Shoe Company, 159 Fed., 542, it was held by the Court of Appeals of the First Circuit that, although Art. 4 bis on its face was self-executing, it was controlled by implication by the passage by Congress of the Act of March 3, 1903, to give effect to it. But neither of these views in my judgment can be sustained. Having respect to their terms, it cannot be said that either the Treaty of 1883, or the additional Act of 1900, required legislation here to make it effective. They both undertake in the most direct and positive way what shall and what shall not be as to the matters with which they deal, and being ratified in that form, nothing further, by our laws, was necessary to put them into operation. They cannot be treated as mere agreements by the high contracting parties to bring the domestic laws of each into conformity with them by subsequent action. That resulted by virtue of their own force and vigor. A treaty is a law of the land as an Act of Congress is, whenever its provisions prescribe a rule by which the rights of the private citizen or subject may be determined. *Head Money cases*, 112 U. S., 580, 598. * * *"

"Taking Treaty and Acts of Congress together, therefore, the case stands this way: By Sec. 4887 Revised Statutes, a domestic patent for the same invention previously patented abroad was made dependent on the term of such foreign patent, by which it was limited. The Act of March 3, 1897, removed this restriction, but provided (Sec. 8) that it should not apply to patents granted prior to January 1, 1898, nor to applications filed before that on which patents were subsequently granted. * * * Then the additional Act of Brussels of 1900 was ratified, by which, according to Art. 4 bis, there was a complete unfettering of foreign and domestic patents for the same invention; and this by express terms was made to apply to existing patents. Such was the state of the law, and such the position of the patent in suit, when the Act of March 3, 1903, came into existence. As just stated, this could not undo what had already been done, nor put back the patent into its former dependent condition. Having become entitled to the full term of 17 years accorded to patents generally, it could not thereafter be again restricted. Nor did the Act of 1903, indeed, undertake to do so. It simply re-enacted Sec. 4887, as amended by the Act of 1897, leaving out the limitation which time and treaty had doubly disposed of, and introducing certain provisions in conformity with the treaty. * * *"

Chicago, Oct. 9, 1909.

EXAMINING SUSPECTED MILK

From Bulletin of New York State Department of Health

IN the ordinary routine analysis, laboratories do not attempt to isolate the bacillus typhosus. Usually all that is attempted is the isolation of the *B. coli* type and the determination of its approximate quantitative prevalence.

Milk, being an animal product, is almost always more or less polluted with *B. coli* organisms from animal sources.

The determination of the number of these organisms is a way of judging of the conditions of cleanliness under which the milk is produced.

The fewer the fecal organisms, the better the conditions have been.

Proof of the presence of fecal organisms, however, can be of but little aid in drawing conclusions as to the possibility of the particular milk being the source of a typhoid infection.

A more satisfactory way would be to gather all available data as to the history of the individual cases of typhoid included in the epidemic, the object being to find, if possible, a cause which might be common to most of the cases.

See if the cases are quite fairly distributed throughout the place or are confined to one particular locality.

Except in the places where the milk supply is distributed by large dairy companies, who often obtain their supply from widely scattered sources, the milk is usually distributed by small dealers who obtain their supply from a comparatively restricted source.

It is not usual for several sources of milk to be infected at the same time, so that if the epidemic was caused by milk we would expect to find the cases confined mostly to the customers of a single dealer's route or possibly to several dealers who might distribute milk from the same source.

If most of the typhoid cases occurred in families using milk from the same dealer or from dealers distributing milk produced at the same place, we then have some evidence that would warrant us in assuming that milk was the probable cause of the infection, and we should then trace the milk

from the point where it was first produced until it reached the consumer, bearing in mind the more probable ways in which the milk might become infected.

First, by the milk or its containers being handled by some one sick with typhoid fever or some one who has had typhoid and who still has the typhoid organism in their discharges (bacilli carriers).

Second, milk may become infected from the utensils and containers which have been washed with water which was infected with the typhoid organism.

Third, the milk may have been diluted with water which was infected with the typhoid organisms.

Fourth, if the milk is distributed in bottles, and the bottles are not properly sterilized after being returned from the customer, it is possible for bottles that have been in homes where typhoid fever exists to carry the disease into other homes.

If, then, in studying and comparing the histories of the individual cases included in a typhoid epidemic we find evidence which warrants us in suspecting a milk supply as a possible cause of the infection, it is well to advise the users of the suspected milk to boil it until we have been able to show that our suspicions were not well founded or shall have corrected conditions so that the supply is again of unquestioned purity.

It is then our duty to trace the milk from the original producer to the consumer, and to find if the milker or anyone coming in contact with the milk has or has had typhoid fever or some intestinal disease that might be typhoid that was unrecognized, or if any members of the families of those who would come in contact with the milk in any way could be the source of infection.

We should also satisfy ourselves as to the purity of the water supply used in washing the milk utensils or that might be used for diluting the milk.

By making such an investigation, we can often locate the source of infection and stop it by prohibiting the sale of the milk that has carried the infection, or we can eliminate from the milk production the individual or family that was the cause of the infection or correct conditions so that the milk will be free from infectious organisms.

NARROW RESIDENCE STREETS

THE question of narrower residence streets is receiving consideration by California cities, and reference to this fact is made from time to time in *Pacific Municipalities*, the official organ of the League of California Municipalities. In a recent issue of this monthly periodical appears an interesting item concerning Coronado City. In this city the roadways are in general 48 feet between curbs, but it is proposed to make them 32 feet wide, the present 16-foot sidewalk being increased to 24 feet, a considerable part of which will be improved by grass plots and trees. It is proposed that the trustees of the city design future residence streets on this general idea. Incidentally, it is interesting to note that such work will be done under the district plan, the city being divided into eight assessment districts for this purpose.

Reference is made to several instances of narrow streets in other cities, as follows: "Prairie Avenue, Cottage Avenue and several millionaire residence streets in Chicago are 30-foot streets. Kansas City's residence portion has miles of similar narrowed and parked streets, making an impressive effect as cool, shady avenues. Sacramento, Woodland, Chico, and even San Diego, have adopted this sensible plan for residence streets." (We understand that in this quotation the word "street" refers to the roadway only.) A resident of Sacramento states that he spent some time with a tape on the streets of Seattle and found most of the roadways of the residential streets to be only 24 feet wide, some of the newer streets being only 20 feet. One street in the best residential section was 26 feet between curbs and had 6-foot stretches of parking through the center of this space, leaving only 10-foot roadways on either side. These streets are paved with asphalt. This, of course, refers only to residence streets in which there are no street car lines.

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It is also desired that the facilities furnished by the reference library in this office should be widely known and freely used by those interested in municipal affairs. Visitors will be welcomed and provided with conveniences for search, and inquiries by mail will be promptly dealt with.

OCTOBER 27, 1909.

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Citizens' Associations

THE idea of an association of citizens banded together in order, by united action, to make their weight felt with municipal authorities, to finance investigations of local conditions and the employment of experts to furnish advice, and for many other movements for civic betterment, has become quite general throughout the country, not only in the larger, but also in the smaller cities. In fact, in many cities such associations have been organized by neighborhoods or units of the city having common interests along certain lines.

An illustration of this last is given by the District of Columbia, where there are 25 citizens' associations. The purpose of these associations was recently described by the Washington *Star*, from which the following has been abstracted:

The citizens' association as organized in this city is a unique institution, admirably meeting local requirements and admirably fitted to accomplish the purposes to be achieved. Each is a sectional town council immediately representing the needs and ambitions of its particular locality. While each stands for sundry sectional betterments, collectively, and especially as organized in the Board of Trade and Chamber of Commerce, they stand for betterments that concern the District as an entirety. In a way they represent the citizens of the United States, because those citizens have a real as well as a sentimental interest in the good government and physical upbuilding of the National Capital. In the aggregate these citizens' associations are a quasi city council, unofficial, but potent nevertheless. It is a very democratic city council in that practically anybody who wishes may join it.

It is an organization that truly represents the will of the people of the District. The voice of the citizens' associations is the crystallized public opinion of the District. It is a combination in the formation, formulation and expression of public opinion of the people which the official governors of the District—the Board of Commissioners and the Congress of the United States—heed. The will of the people is not always immediately obeyed, but is always finally obeyed. In the long run it is irresistible. The aggregate of the citizens' associations of the District, in part organized in the Board of Trade and Chamber of Commerce and unorganized in part, is a body more representative of the direct taxpayers and all other residents than the aldermanic council of any American city.

The form of government of the District makes it more desirable that the citizens be able to express their wishes thus publicly than is the case in most cities; but the advantage of such associations is but little less in almost any large community.

Comparing Municipal and Private Plants

OUR attention has recently been called to a more or less common oversight in making comparisons between the operating costs of municipal and of private water works plants; the same applying to light and other plants as well. This is the possibility that the costs included in the figures for the municipal plant may not contain many items which must necessarily be met by a private plant. We have several times referred to this fact itself, but we desire now especially to call attention to its bearing upon comparison of water rates or of costs of street lighting. The former is especially open to this comment, because the water rate for every city can readily be obtained, while the cost of street lighting by a municipal plant is often not estimated at all, and is generally recognized as being only an estimate not entering into any actual financial transaction.

A city which is endeavoring to determine whether it is being overcharged by a private water company may compile a list of water rates in a number of cities served by municipal plants and in others served by private plants, and apparently demonstrate that rates in the municipal plants are generally lower than those of private plants, and on this base an argument for municipal ownership. As a matter of fact, it is very probable that most of the municipal rates should really be increased, because the department is practically supported by funds from the city treasury, which come out of the tax payers' pockets. Such comparisons can be made intelligently only when the financial statements of both municipal and private plants are made on a uniform basis, which includes all of both assets and expenditures, whether these be of actual cash or of services or other considerations of value.

We do not wish to be understood as implying by the above that cities are not warranted in owning and operating water works and other public utilities. On the other hand, we believe that very frequently they are justified from economical as well as from other considerations in adopting municipal ownership. We merely wish to call attention to the fallacy of some of the arguments used to persuade to the adoption of municipal ownership, and which frequently raise expectations which are disappointed in the actual operation of the plant.

MUNICIPAL BOND SALES

Data Concerning Sales of Municipal Bonds During September by Cities of Less than 100,000 Population—
Financial Statistics of Cities Listed

NAME OF CITY	Estimated Population	ACTUAL VALUE OF ASSESSABLE PROPERTY (estimated)		Ratio of Ass'd to Act'l Value	Bonded Debt	Sinking Fund	NET BONDED DEBT		Tax Rate Per \$1,000 Ass'd Value	BOND SALES, SEPTEMBER, 1909				Basis
		Total	Per Cap-ita				Total	Per Cap-ita		Term of Years	Amount	Interest	Price	
Brighton, Ala.	1,500	\$205,354	\$137						\$5.00		\$10,000		91.00	
Rogers, Ark.											35,000		100.714	
Douglas, Ariz.	10,000	5,000,000	500	60%	\$75,000		\$75,000	\$7.50	8.00	1-30 ser.	325,000	5%	100.04	4.996
Elmhurst, Cal.										1-20 ser.	75,000	5%	Par	
Glendale, Cal.	2,500	2,000,000	800	60%	44,750		44,750	18.00	13.60	1-40 ser.	40,000	5%	103.635	4.721
Monrovia, Cal.											16,500	5%	102.584	
New Canaan, Conn.										30	45,000	4%	Par	
Daytona, Fla.	5,229	3,750,000	717	40%	16,500	\$742.45	15,757.55	3.00	15.00		35,000		Par	
Commerce, Ga.	2,200	2,760,000	1,254	33 1/3%	61,000	1,800	59,200	27.00	1.10		8,000	5%	100.75	
Decatur, Ill.										12 1/2 av.	75,000	4%	Par	
Manteno, Ill.										22	5,000	5%	Par	
Paxton, Ill.										4 1/2 av.	8,000	5%	101.362	4.647
Terre Haute, Ind.	65,000	50,000,000	777	61%	506,000	40,000	466,000	7.00	10.50		77,820		100.03	
Seymour, Ia.										20	35,000	5%	104.02	4.688
Hutchinson, Kan.	16,000	21,000,000	1,312	100%	225,000	20,000	205,000	13.00		20	60,000	4 1/2%	101.00	4.424
Kansas City, Kan.										30	400,000	4 1/2%	103.875	4.269
Wakeney, Kan.										00-20 op.	10,000		Par	
Mayfield, Ky.	8,000	3,500,000	436	75%					10.00	11 1/2 av.	75,000		Par	
Alexandria, La.	16,000	20,000,000	1,250	12 1/2%	160,000		160,000	10.00	15.00	20-40 op.	40,000	5%	101.00	4.921
Brewer, Me.	5,500	2,237,920	407	75%	94,000		94,000	17.00	27.00	20	30,000	4%	104.573	3.674
Eden, Me.											30,000	4%	103.35	3.683
Lisbon, Me.	4,800	2,347,775	489		79,500	3,000	76,500	16.00	20.00	11-16 ser.	30,000	4%	104.30	3.693
Clinton, Mass.										20	74,000	4%	101.939	3.608
Easthampton, Mass.										1-10 ser.	10,000	4%	101.00	3.83
Everett, Mass.	31,944	24,950,350	781	100%	840,000	310,832	529,168	16.00	18.50	7 av.	38,000	4%	101.419	3.687
Gardner, Mass.										5 av.	50,000	4%	100.79	3.81
Malden, Mass.	39,795	32,759,650	828	100%	2,080,600	703,380	1,377,220	34.00	18.00	1-8 ser.	8,000	4%	109.81	3.471
Northampton, Mass.										30	30,000	4%	Par	
Bay City, Mich.	50,000	15,500,000	310	75%	1,000,000				21.80	5 av.	29,000	3.65%	102.792	4.372
Flint, Mich.	16,000				684,092	105,160	578,932	14.00			13,000	5%	103.00	
River Rouge, Mich.											82,700	4%	101.25	4.919
										30	40,000	5%	Par	
Saginaw, Mich.	61,585	25,210,038	409	70%	2,601,032	96,611.45	2,504,420.55	41.00	20.25	1-10 ser.	147,000	4%	Par	
										1-5 ser.	8,500	4%	Par	
										1-15 ser.	15,000	4%	Par	
										5-8 ser.	10,000	4%	Par	
										1-8 ser.	32,000	4%	Par	
										1-20 ser.	50,000	4%	Par	
										1-10 op.	4,000	5%	101.00	3.97
Cologne, Minn.										4-19 ser.	16,000	5%	100.487	4.963
Hawley, Minn.										3 1/2 av.	12,000	5%	103.583	4.64
Montevideo, Minn.	3,200	400,000	33	125%	45,000	6,000	39,000	12.00		20	10,000	6%	Par	
Wirt, Minn.											10,000	4%	Par	
Booneville, Miss.	2,000	1,000,000	500	77%	16,000		16,000	8.00	6.25	20	10,000	4%	Par	
Gulfport, Miss.											50,000	5%	101.02	
Leakesville, Miss.										17 1/2 av.	7,000	6%	100.514	5.964
Natchez, Miss.	20,000	15,000,000	750	66 1/3%					19.00	20	47,500	5%	103.25	4.742
Webb City, Mo.	16,000	6,532,125	408	40%	77,281	13,925	63,356	4.00	10.00	10-20 op.	8,500	5%	101.07	4.49
Billings, Mont.	14,000	5,000,000	357	50%	50,000	5,000	45,000	3.20	10.00	10-20 op.	80,000	4%	103.025	4.496
Central City, Neb.										5-20 op.	18,000	5%	102.22	4.494
Nashua, N. H.	28,000	24,536,299	876	66 1/3%	857,508	264,966	592,542	21.00	21.70	20	46,000	4%	Par	
Avon-by-the-Sea, N. J.											10,000		Par	
Holly Beach, N. J.	3,500	2,200,000	628	50%	110,000				23.50	30	52,000	5%	100.04	
Lodi, N. J.										30	80,000	5%	105.391	4.664
Westwood, N. J.										3-22 ser.	10,000	5%	103.28	4.65
Baldwinsville, N. Y.										20	50,000	4%	Par	
Glens Falls, N. Y.	16,700	10,000,000	598	60%	360,000		360,000	22.00	14.45	7-11 ser.	50,000	4 1/2%	Par	
Mamaroneck, N. Y.	5,000				215,000		215,000	43.00	7.33	5-14 ser.	5,000	4.30%	100.22	4.272
Olean, N. Y.										10-19 ser.	25,300	4%	107.596	4.423
										8 av.	25,000	5%	103.596	
Rensselaer, N. Y.										6-25 ser.	40,000	4%	Par	
Salamanca, N. Y.										9 av.	17,017	4 1/2%	101.921	4.241
Scotia, N. Y.										1-20 ser.	10,000	4.40%	100.11	4.386
										14	4,600	4.75%		
										13	2,000	4.75%	Par	
										15	5,000	4.75%		
Troy, N. Y.	76,000	50,665,571	666	100%	3,956,606	148,355	3,808,251	50.00	18.05	2 mos.	150,000	4%	Par	
Tupper Lake, N. Y.										5-14 ser.	5,000	4 1/2%	100.133	4.481
										5-12 ser.	4,000	4 1/2%	100.133	4.481
										5 av.	4,000	4%	Par	
Utica, N. Y.	72,500	41,252,122	569	65%	1,747,650		1,747,650	22.10	17.36	15 1/2 av.	7,850	4%	Par	
										4 1/2 av.	4,400	4%	Par	
										3 av.	6,000	4%	100.08	3.971
										3 1/2 av.	2,040	4 1/2%	101.40	4.091
										2 5-6 av.	2,500	4 1/2%	101.38	4.007
										3 5-6 av.	7,170	4 1/2%	101.40	4.115
										2 5-6 av.	7,900	4 1/2%	101.37	4.01
										2 1/2 av.	17,500	4 1/2%	101.26	3.966
										2 1/2 av.	13,800	4 1/2%	101.30	3.885
										3 av.	2,280	5%	101.10	4.603
										3 1-6 av.	1,100	5%	100.61	4.78
										5 1-6 av.	3,000	5%	102.50	4.44
Akron, O.	50,000	40,000,000	800	75%	1,280,995		1,280,995	25.60	32.00	3 1/2 av.	6,000	5%	102.10	4.346
										6 1/2 av.	5,600	5%	104.00	4.287
										5 1/2 av.	3,300	4 1/2%	101.06	4.282
										3 1/2 av.	1,000	5%	101.60	4.60
										3	1,200	5%	101.39	4.50
										2 1/2 av.	1,000	5%	101.10	4.529
										4 1/2 av.	2,000	5%	102.05	4.465
										4 av.	2,000	5%	101.40	4.613
										6 1/2 av.	5,000	5%	104.20	4.208
										5 1/2 av.	7,100	5%	103.77	4.22
										7 1/2 av.	24,275	4 1/2%	101.32	4.18
Alliance, O.	15,000	12,467,370	831	33 1/3%	578,190		578,190	38.50	30.20	7 1/2 av.	5,000	4 1/2%	103.08	4.008
										1-5 ser.	13,500	5%	101.896	3.825
										1-10 ser.	2,735	4 1/2%	100.52	4.378
										4 av.	1,494	4 1/2%	100.52	4.378
										10 av.	1,200	5%	104.77	4.404
										17 av.	25,000	4 1/2%	104.673	4.115
										20	13,000	4%	100.40	3.971
										5 av.	3,800	4 1/2%	102.157	4.02
										5	17,000	5%	103.511	4.71
Bedford, O.														
Berea, O.	3,000	1,500,000	500	60%	90,935	3,300	87,635	29.00	29.80					
Bradford, O.	1,847	1,000,000	541	50%	32,000	1,500	30,500	16.00	1.50					
Canton, O.	45,000	60,000,000	1,333	25%	306,000		306,000	68.00	32.00					
Chardon, O.														
Delphos, O.														

MUNICIPAL BOND SALES—Continued

NAME OF CITY	Esti- mated Popu- lation	ACTUAL VALUE OF ASSESSABLE PROP- ERTY (estimated)		Ratio of Ass'd to Act'l Value	Bonded Debt	Sinking Fund	NET BONDED DEBT		Tax Per Rate \$1,000 Ass'd Value	BOND SALES, SEPTEMBER, 1909				Basis
		Total	Per Cap- ita				Total	Per Cap- ita		Term of Years	Amount	Interest	Price	
Elyria, O.	17,000	\$5,422,570	\$318	60%	\$1,141,900	\$112,760	\$1,029,140	\$60.00	\$42.00	5-5-6 av.	\$91,325	5% s.a.	104.243	4.171
Fayette, O.										6 1/2 av.	13,860	4 1/2% s.a.	101.37	4.256
Fredericktown, O.										3-5 ser.	1,200	4% s.a.	100.833	3.775
Glendale, O.										20	14,000	4 1/2% s.a.	106.027	4.057
Lakewood, O.	10,000	12,000,000	1,200	37%	1,073,044	100,504	972,900	97.30		1-10 ser.	30,000	5% s.a.	100.675	4.305
London, O.										1-5 ser.	18,560	5% s.a.	103.70	4.239
Londonville, O.										1	3,530	5% s.a.	101.53	4.45
Middletown, O.	15,000	15,000,000	1,000	33 1/3%	369,217	14,857	354,360	23.00	2.98	11 av.	7,000	4% s.a.	100.371	3.958
Millersburg, O.										5 1/2 av.	8,035	4 1/2% s.a.	103.413	3.799
Napoleon, O.	5,900	3,000,000	500	33 1/3%	186,890		186,890	37.40	47.20	6 1/2 av.	18,165	4 1/2% s.a.	102.01	4.144
Newburg, O.										1-9 ser.	2,502	4% s.a.	Par	
										1-3 ser.	1,194	5% s.a.	100.50	4.731
										5 1/2	33,600	4 1/2% s.a.	101.51	4.201
										6 1/2	15,350	4 1/2% s.a.	101.498	4.221
										6	13,950	4 1/2% s.a.	101.326	4.247
										30	3,000	4% a.	106.21	3.657
										30	5,500	4% a.	105.56	3.686
										30	2,000	4% a.	107.76	3.576
										30	2,500	4% a.	106.21	3.657
Oakley, O.										1-10 ser.	1,412	5% a.	Par	
										14 1/2 av.	25,000	4 1/2% s.a.	103.138	4.284
										14 1/2 av.	16,500	4 1/2% s.a.	103.138	4.284
										8 av.	4,000	5% s.a.	103.138	4.284
										1-10 ser.	1,029	5% s.a.	102.04	4.575
										4 1/2 av.	7,500	4 1/2% s.a.	102.133	4.001
										3 1/2 av.	5,000	5% s.a.	102.28	4.331
										12	5,000	5% s.a.	106.00	4.353
										8 1/2 av.	5,000	8% s.a.	101.02	
										10	1,500	4% s.a.	Par	
										10	3,500	5% a.	100.52	4.933
										8 1/2 av.	6,000	5% s.a.	105.116	4.231
										2-12 ser.	110,000	5% s.a.	100.109	4.98
										2-6 ser.	12,990	5% s.a.	101.008	4.702
										2-6 ser.	30,140	5% s.a.	101.01	4.702
										2-6 ser.	10,000	5% s.a.	101.03	4.701
										2-6 ser.	1,075	5% s.a.	100.83	4.741
										2-6 ser.	445	5% s.a.	100.89	4.752
										2-6 ser.	385	5% s.a.	101.90	4.752
										25	50,000	6% s.a.	100.10	5.993
										25	100,000	6% s.a.	107.01	5.483
										20	50,000	5% s.a.	Par	
										24 1/2	105,000	5% s.a.	Par	
										25	105,000	5% s.a.	Par	
										1-10 op.	15,000	6% s.a.	101.06	
										5 1/2 av.	5,000	5% s.a.	Par	
										26-30 ser.	25,000	5% s.a.	110.87	4.326
										20 av.	80,000	4% s.a.	Par	
										30	85,000	4 1/2% s.a.	100.502	4.469
										10-20 op.	80,000	3 1/2% s.a.	Par	
										21 1/2 av.	40,000	4 1/2% s.a.	103.067	4.28
										3-5-6-8 op.	15,000	5% s.a.	Par	
										15 1/2 av.	100,000	4 1/2% s.a.	101.531	4.361
										17 av.	7,000	5% s.a.	Par	
										17 av.	14,000	4% s.a.	100.25	
										20	1,000	4% s.a.	101.00	
										20	200,000	4% s.a.	100.001	3.999
										20	100,000	4% s.a.	Par	
										20	2,500	6% s.a.	Par	
										40	260,000	4% s.a.	Par	
										10-20 op.	25,000	5% s.a.	Par	
										17 1/2 av.	95,000	4% s.a.	Par	
										20	25,000	5% s.a.	Par	
										1-10 ser.	10,000	5% s.a.	100.62	4.87
											4,100	5% s.a.	Par	
										20	65,000	4% a.	Par	
											5,000	4 1/2% s.a.	Par	
										7 1/2 av.	6,000	5% s.a.	103.13	4.503
										20	125,000	4% s.a.	Par	

FIRE LOSSES IN LARGE CITIES

Editor, Municipal Journal & Engineer.

New York City.

Dear Sir: Can you give me the fire losses in the fifteen largest cities in the United States for the years beginning with 1900 and ending with 1908?

Very respectfully yours,

B. P. S., Fire Commissioner.

The following table, compiled from our records, gives practically the information asked for:

Fire Losses in Fifteen Largest Cities, 1899 to 1908, Inclusive

NAME OF CITY	1899	1902	1904	Average, 1900 to 1904, Inclusive	1905	1906	1907	1908
New York, N. Y.	\$11,277,311	\$13,997,124	\$15,335,046	\$16,781,978	\$17,852,138	\$19,783,936	\$24,233,048	\$23,602,818
Chicago, Ill.	46,553,636	*64,729,071	*4,514,423	4,386,586	*4,239,546	*4,730,846	*5,170,033	5,678,620
Philadelphia, Pa.	4,026,352	2,152,971	1,640,198	2,450,374	1,636,877	2,424,643	2,093,522	2,440,338
St. Louis, Mo.	*9,017,904	1,614,947	*929,696	1,696,509	1,044,680	1,588,726	1,588,726	1,406,163
Boston, Mass.	1,699,900	1,575,533	2,491,706	1,907,337	2,143,031	1,246,110	2,314,517	3,209,420
Baltimore, Md.	446,041	682,991	50,477,615	10,852,698	398,476		916,603	1,123,175
Cleveland, O.	*4,949,475	599,822	770,482	788,955	*522,504	*876,515	514,782	*829,252
Buffalo, N. Y.	796,322	517,693	1,168,153	1,138,996	1,981,243	*1,126,930	*1,018,017	1,076,844
Pittsburg, Pa.	391,121	578,216	653,273	899,936	*567,800	408,437	614,103	572,149
San Francisco, Cal.	754,687	691,224	791,340	863,622	1,052,238	1,477,924	1,271,488	1,857,026
Detroit, Mich.	633,003	447,571	998,667	633,669	643,172	808,017	1,617,990	1,902,341
Cincinnati, O.	985,860	1,007,575	1,236,732	1,278,329	314,634		1,971,217	713,567
Milwaukee, Wis.	417,580	471,898	616,296	622,135	747,976	430,005	531,681	433,369
Sparta, Wis.	554,552	*1,424,725	720,141	917,660	3,679,258	732,113	593,353	2,582,539
Superior, Wis.	42,000		764,793	111,658	653,135	15.00	33.40	
Washington, D. C.	466,590	134,504	296,312	234,855	224,851	121,916	434,272	347,264

*Total insurance loss only.

†This does not include \$350,000,000 loss by San Francisco earthquake.

CAST-IRON PIPE PRICES

WATER Works companies and cities which have been sufficiently foresighted and financially able to buy cast-iron pipe during the early fall have undoubtedly made a most profitable investment. Prices have risen \$2 or more during the past two months, or from about \$23.50 to \$25.50, in spite of a reduction in the tariff from \$4 to \$2.50. Indications are that it will go still higher, and we suggest placing orders now for all pipe needed within the next few months.

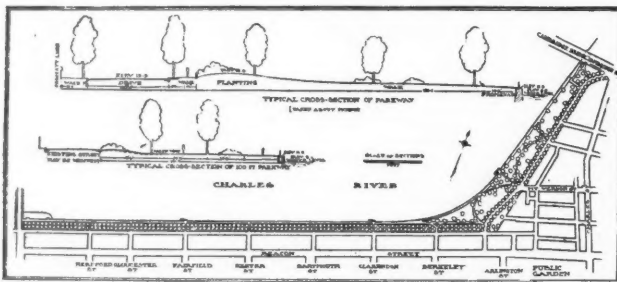
NEWS OF THE MUNICIPALITIES

Current Subjects of General Interest, Under Consideration by City Councils and Department Heads—Streets, Water Works, Lighting and Sanitary Matters—Police and Fire Items—Government and Finance

ROADS AND PAVEMENTS

Esplanade Nearing Completion

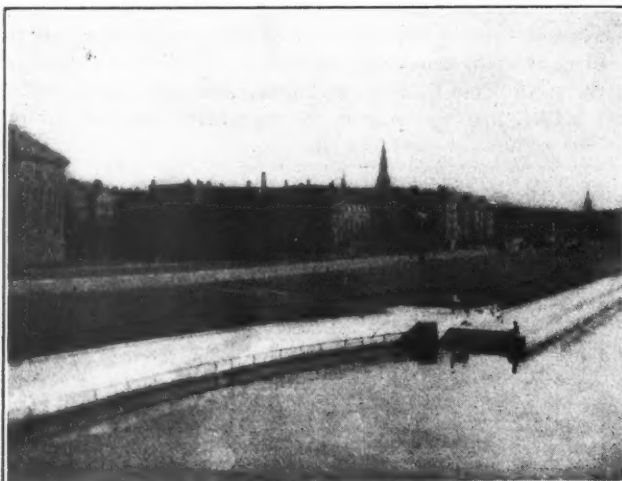
Boston, Mass.—After more than three years of labor and an expenditure aggregating over \$635,000, the Charles River esplanade, which will add to the beauty of the stream and enhance the value of adjoining property, is nearly complete. Save for the planting of trees and shrubs, the work as far as Berkeley street will be finished this fall, and spring will find the whole embankment sown with grass and planted with shrubbery. Along the foot of the esplanade, lying flush with the seawall of huge granite blocks, stretching from Cambridge bridge beyond Harvard bridge, runs a granolithic walk 20 feet in width, protected on the river side by an iron railing. This promenade extends from Cambridge bridge to Charlesgate West, crossing the outlet of the Fens on a three-arch bridge. From each street opening into the old road which ran along the riverside parallel to Beacon street paths and walks are being built across the



CHARLES RIVER EMBANKMENT—PLANS AND CROSS SECTIONS

embankment to the promenade. From the end of the approach to Cambridge a boulevard 45 feet in width is being laid out to the foot of Otter street. Bordering the drive on either side is a parking five feet wide and a walk 10 feet wide, thus making the total width of this way 75 feet. The embankment from Cambridge to Otter street varies from 200 to 300 feet in width, and opposite Back street it narrows to a width of 100 feet. Back street, which is a private way owned by Beacon street people whose lots run to the old sea wall, is now being improved and a low wall is being erected along the side bordering the esplanade.

Throughout the length of the embankment a water pipe has been laid and ducts constructed for wires conveying the electric current for lighting purposes in the park. In addition, a sewer has been built from Cambridge to Otter street, to connect bathhouses along the embankment with the city sewerage system.



Courtesy Boston Herald

CHARLES RIVER EMBANKMENT

City to Save on Street Paving

Chicago, Ill.—Saving of thousands of dollars to the city is expected to result from an agreement reached between contractors and the Department of Public Works and the Board of Local Improvements that the price for asphalt street laying in connection with track rehabilitation work shall be \$2.25 a square yard. Previously it has been as high as \$3 and \$5 a square yard. When the traction companies went in on a street which is still under a five-year guaranty from the contractor who originally laid the pavement, under their obligation to restore the street to its original condition, they were obliged to pay the contractor's own price. All such work was added to the cost of rehabilitation and to the capital account, proportionately diminishing the city's 55 per cent of net receipts. Under the new arrangement contractors will charge the uniform price.

Sand vs. Limestone-Screenings in Concrete

Chicago, Ill.—At a meeting of the Board of Local Improvements and its engineers, a vote was taken on the question of allowing the use of limestone screenings in the place of sand in concrete. All four members of the Board and thirteen of the fourteen engineers present voted in favor of the use of sand. The conference also decided to prohibit "slushing" of concrete, and orders to contractors to that effect were issued.

Creosoted Wood Paving in Iowa

Clinton, Ia.—Clinton is experimenting with creosoted wood block paving. One block adjoining a local park is being paved with the blocks and the council is taking steps to pave a second block before the advent of cold weather. If the substance is found desirable several blocks will be paved with the wooden blocks during the next year. Cement sidewalks were constructed by the wholesale during the present year in Clinton, all of the old plank walks disappearing from the business and main residence districts during the summer and fall.

Contractor Nearing End of Work

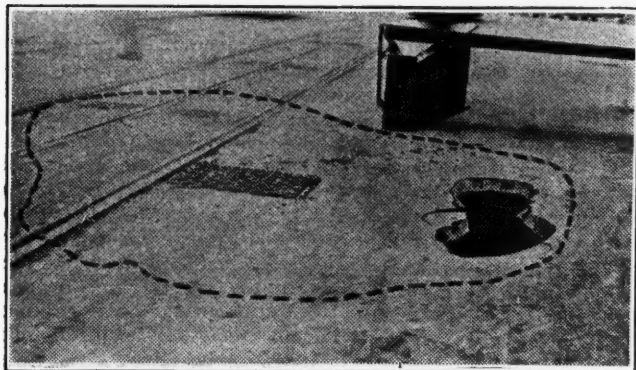
Grand Forks, N. D.—Work on the last lap of Grand Forks' many paving contracts has been commenced by Contractor P. McDonnell, of Duluth. There are two big stretches of Donnellite pavement to be laid, and, with fair weather, it is expected that the greater portion of the work will be completed this fall. The paving work in Grand Forks this year amounts to about \$200,000 all told.

To Remove Sidewalk Obstructions

Racine, Wis.—If the Common Council heeds the recommendation of the street and judiciary committees, then the much-disputed sidewalk display of fruit and produce in front of stores will soon be a thing of the past, as at a final meeting the joint committee, who has wrestled with the problem for months past, finally agreed to report for passage the pending ordinance prohibiting all such displays, not only from a sanitary point, but also because they obstruct passage in general, and the sidewalks are for the masses and not for the classes. The action of the Board of Health, opposing the display of produce to the germ-filled dust of the streets, from a hygienic standpoint, may have had some bearing on the discussion of the committee-men, but the deciding weight in the balance was a counter petition presented by 150 merchants on Main, Sixth and State streets who asked to have their names stricken off from the original petition gotten up in opposition to the proposed ordinance.

Rollerman's Wages Going Up

York, Pa.—The Street Committee was informed that Harry Seacrist, the man in charge of the city road roller, had asked for an increase of wages from 22½ cents to 25 cents an hour and in the event of its not being granted would quit. After some discussion of Mr. Seacrist's ability, which was in every way favorable, Mr. Bahn moved to give advance and it was agreed to.



CAVE IN AT CENTRAL PARK, NEW YORK CITY
Dotted line shows extent of hole under asphalt

Cave Discovered Under Asphalt Pavement

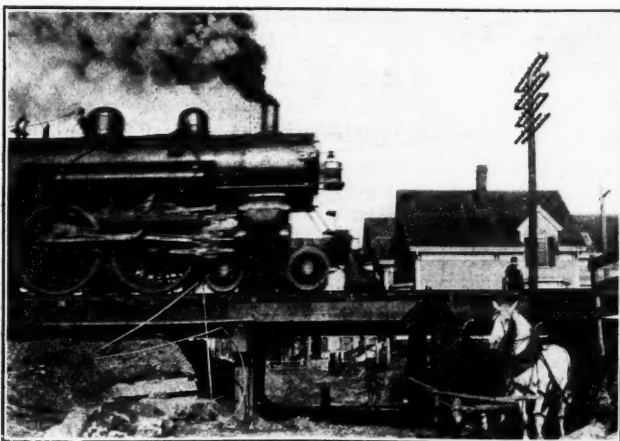
New York, N. Y.—The sinking of the wheel of a heavily loaded van through a break in the asphalt pavement of Fifty-ninth street near Fifth avenue led to the discovery that a cave existed of irregular shape about 12 feet long by 10 feet wide and 7 or 8 feet deep under the pavement. From appearances it would seem as if the cavern had existed for some time and that the concrete base and asphalt surface, supported on one side by the concrete work under the street car track, had successfully carried the street traffic. The opening is opposite the Plaza Hotel, the foundation of which extends 75 feet below the street level. The location is that of an old creek that used to drain a pond in Central Park. The presumption is that the sand from the creek had washed down into some cavity alongside the foundation of the hotel.

Would Go Slow on New Road Materials

Youngstown, O.—Commissioner Ad L. Wymer is of the opinion that the good roads craze in this section has about reached the high tide, and he thinks it would be well to thoroughly investigate the different kinds of road construction before the county's money is sunk in any more road construction. The Commissioner is responsible for the suggestion that the district hold up its wild issuance of good roads bonds for about two years and give to four contractors advocating different makes of roadway a fair trial of their makes, in that they each would be allowed to build an eighth of a mile of their kind of road along a certain highway to be designated, and then allow the four different kinds of road to be subjected to travel for about two years and thus ascertain which will give the best service.

Digging for Grade Under Railway

Lynn, Mass.—The reproduction shows work actively going on in the elimination of the grade crossing at Chatham street. The grade as shown is eight feet below the stringers of the railroad track and will be excavated eight feet below. Residents along the street are now entering their houses by special steps and walks, or through the back way.



Courtesy Lynn Item.

LOWERING STREET UNDER RAILROAD

SEWERAGE AND SANITATION

Individual Drinking Cups Ordered in Schools

New Orleans, La.—An ordinance has been passed prohibiting the common use of drinking utensils in the public schools of New Orleans. Every teacher and pupil must provide himself with a drinking cup, under penalty of a fine for violation of \$5 for each day's offense. Dr. O'Reilly, Health Officer, would like to see bubbling fountains installed, but that proposition is opposed by the Sewerage and Water Board on the ground that the waste of water is too great.

Sanitary Conditions Improved

Kalamazoo, Mich.—Rapid strides toward a perfectly sanitary city are being made day by day by the Health Department. A corps of inspectors is at work inspecting odd nooks and crannies of the city, ordering clean-ups, and cleanliness follows. Eight hundred orders for sewer connections have been issued during the season. Six hundred of these were new orders, and about 200 are orders that have been reissued. Two hundred and fifty of these orders have been complied with, and every day makes new additions to those who swing in line. It is expected that by the end of October at least 400 will have complied with the orders. While it is true that the requirements of the Board of Health are more severe than ever before, more and better results are being accomplished than ever before.

City to Fight Tuberculosis

New York, N. Y.—Many physicians of the city and representatives of civic and charitable organizations appeared before the Board of Estimate to urge the granting of the appropriation of \$487,250 which has been asked for to continue on a larger scale the prevention and care of tuberculosis. It was promised that if the budget provided for the appropriation the Board of Health, the Board of Education, the Charities Department and the Trustees of Bellevue and allied hospitals would combine to fight the "white plague." The money would be spent in establishing clinics, for the maintenance of places for the care of tubercular patients and to provide separate schools for children who are found to be consumptive. The probability is that the appropriation asked for will be included in the new budget.

Delays Bronx Sewer Suit

New York, N. Y.—On motion of counsel for the Government, the Supreme Court at Washington extended until November 1 the time within which the State of New York can file its reply to the bill of the United States to restrain the construction of the Bronx sewer. The date fixed for filing the State's reply was October 11, when the Sewer Commissioners, by their counsel, appeared and made formal return to the rule. The Government alleges that the matter to be carried by the sewer, which is to extend from Yonkers to the Harlem River, would not only so pollute the waters of New York harbor to such an extent that the health of the city would be endangered, but would also impair the great works of improvement in navigation there upon which vast sums have been expended.

To Keep Mine Water as Well as Sewage Out of River

Wilkes-Barre, Pa.—In discussing the sewerage question with Attorney M. S. Casterline, of Wilkes-Barre, Dr. Snow, of the State Health Board, made many remarkable statements relative to the plans of the department in connection with the purifying of the waterways of the State which have during the past few years been sadly polluted by sewage and mine water. Both will be excluded from the stream and it is the ambition and hope of the health department to so redeem the river that all danger of a water famine will be eliminated in the future. He declared that it is possible to make the Susquehanna so pure and wholesome that in case of necessity it can be pumped into the water mains and used by residents with little or no danger of disease. Within a short time a proposition will be submitted to the city officials giving them an opportunity to co-operate with the surrounding towns up river for the erection of a large plant to be used in common.

WATER SUPPLY

Bristol May Lose Its Water Supply

Bristol, Tenn.—When City Attorney Whitaker asked permission to file an amended bill as a means of preventing Chancellor Haynes from issuing a mandatory writ of injunction shutting off entirely the water supply of Bristol, Tenn., in the case of Mattox vs. the City, the Chancellor denied the privilege, stating that at the December term he would be obliged to obey the mandate of the Supreme Court and order the water shut off. This means that the city will be without water, unless Judge Coleman of the Law Court can be induced to convene a special term of his court in advance of the date for Chancellor Haynes' court as a means of gaining permission to institute condemnation proceedings against the rights of Mattox. This litigation has been pending for two years, and grew out of the fact that the city declined to pay Mattox his price for his rights in the stream. There is grave apprehension that the city may not be able to prevent the loss of its water supply.

Water Famine Faced

Cambridge, O.—Because Wills Creek, the source of supply for city water has been drained, Superintendent of Water Works J. I. Kidd shut off the city water one evening, and Cambridge faces a serious condition. Many fever cases are reported in the low parts of the city, and an epidemic is feared.

Connect Shore Shaft and Crib

Chicago, Ill.—Connection between the short shaft and the intermediate crib, where more than threescore men lost their lives last January, on the new southwestern land and lake tunnel, was made October 16 when workmen broke through the core separating the gangs of men in the two drifts who have been pushing the work from both ends. The tunnel is being built by George W. Jackson, Incorporated. With the breaking out of this core the tunnel now extends out under the lake from the shore line more than 8000 feet.

Public Well System for County

Dallas, Tex.—County Judge John L. Young is in favor of the establishment of a system of public wells at prominent cross roads over the county, so that there may be at all times ample quantities of fresh and pure water for both man and beast. He said: "Next in importance to good roads, I am impressed with the belief that one of the essentials for this section of the country is a good system of public wells, so placed at prominent cross-roads of the county that the traveling public and their teams may be supplied at all times with the pure water that may be obtained at reasonable depths all over Dallas County.

Leak Stopped, Reservoir Fills

Little Falls, N. Y.—Engineer Dempster discovered a bad break in a water main on South Ann street after it had been evident for some time that water was escaping in large quantities somewhere. By means of an acoustic apparatus similar to a telephone receiver the engineer was able to locate the break, and on examination found that a joint in the 10-inch pipe had given way, allowing a great amount of water to escape under the arch on Mill street. Since the break was repaired water in the reservoir has rapidly accumulated instead of declining as had been the case.

Low Per Capita Consumption of Water

Milton, Mass.—The monthly report of the Metropolitan Water Board for September still gives Milton as the most economical user of water in the district of any of the cities. The per capita consumption of water daily for September, 1908 and 1909, in the district is given below:

	1908	1909		1908	1909
Boston	153	140	Arlington	111	83
Somerville	87	79	Milton	51	43
Malden	50	46	Winthrop	119	90
Chelsea	91	79	Stoneham	92	91
Everett	81	76	Belmont	95	61
Quincy	105	100	Lexington	91	75
Medford	97	77	Nahant	59	46
Melrose	85	62	Swampscott	88	57
Revere	93	88	Entire district	130	117
Watertown	64	54			

Unusual Water Works Ordinance

Peoria, Ill.—The new water works ordinance gives householders the right to turn on water to their premises without getting a permit from the water company and makes it a misdemeanor punishable by a heavy fine for the company or any of its agents to turn that water off again. It also gives the citizens the right to install their own meters and pay for the water used at the rates indicated in the ordinance passed in 1889. A heavy fine is also provided for failure on the part of the water company to furnish meters when demanded. In addition to all these measures designed to protect the citizen in his rights, the corporation counsel offers to fight free of all charge, any suit that may result from following out the terms of the ordinance.

Alarmed at Scarcity of Water

Pittsfield, Mass.—There is great alarm over the scarcity of water. Ashley lake, the city's reservoir, is now little more than a brook fed by springs and is entirely inadequate to supply the city. Residents of the hill section are unable to draw water, and this property is unprotected in case of fire. Chief of the Fire Department Hazard, Joseph Billadeau of the Water Department, and James R. Savery, Superintendent of Peck's mills, have tested the pump at the mill. This pump is capable of turning into the city mains 2,000,000 gallons of water in a day and would almost make up the deficiency in Ashley lake in case of fire. It is likely that the pump will be used.

Algæ Make Water Unpotable

Port Jervis, N. Y.—A growth of algæ in reservoir No. 1 has made the city water so offensive in color and odor that its use in households, without filtering or boiling, has been impossible. Mayor Henry B. Swartwout has finally sent a message to Council recommending that officials of the State Board of Health be called on to make an investigation and devise a remedy. It is supposed that it will be necessary to empty the reservoir and clean the bottom.

Spring Valley Water Works is Accused

San Francisco, Cal.—That the Spring Valley water company has wilfully and maliciously refused to supply with water for domestic and other purposes a residential district of 30 to 40 blocks, in which more than 200 families reside, is charged in a suit instituted by the city. The locality affected by the neglect of the company to furnish water is bounded by Cole street, Hayes street, First avenue and Turk street.

Municipal Ownership in Kansas

Topeka, Kan.—There are 137 cities and towns of Kansas which have water works plants, and of this number 118 own and operate their own plants and nineteen have plants owned by private corporations or firms. The privately owned water plant is fast disappearing in Kansas, and nearly every one of the towns which now does not own its own plant is talking of voting bonds to purchase the present equipment or to buy and build a new plant. Practically every city or town that is considering the building of a water works system is not dicker with any corporation for a franchise, but is going ahead with an issue of bonds to build and equip a plant of its own. The list of municipal water plants in Kansas includes two of the largest cities of the state, Kansas City and Topeka, and many smaller towns and cities. In addition to the municipal water plants a considerable number of towns own and operate their own electric light plants in connection with the water works.

Governor Will Prevent Diversion of Water

Trenton, N. J.—After a conference with Newark and Jersey City officials, Governor Fort announced that he will call a special session of Legislature, if, after consulting with the Attorney-General, he finds it necessary, in order to prevent the Hudson County Water Company from supplying Staten Island with subsurface water from New Jersey. Congressman R. Wayne Parker, who attended the conference as advisor of Mayor Haussling, of Newark, gave his opinion that there was abundant power in the State to stay the laying of pipes under the navigable streams within the State or which were boundary lines of the State. As the pipes would have to cross several streams, no new legislation would be required to prevent the diversion of water.

Water Tower Bursts

White Plains, N. Y.—The water tower of the municipal water works burst October 21, releasing some 100,000 gallons of water. The tank was 20 feet in diameter and 80 feet high; it gave way at a point 24 feet from the bottom. The tank was full of water, it is said, for the first time in a long while. The water tower was built 25 years ago. One anchor rod was broken off, there apparently being no flaw. On the opposite side where the rods fasten to the plate they had pushed up through, one of the nuts being 6 inches above the plates.

Ready to Buy Water From Jersey City

Kingsland, N. J.—The Union Township Committee, at its regular meeting, decided to advise the Jersey City Water Department that it was ready to make a contract for supply of water at an average price of \$50 per million gallons.

Robbing City of Water

Muskogee, Okla.—Three one-inch water mains have been found leading from a tap on a water main to three sections of the oil fields south and west of the city.

Water Rates Reduced

Wakefield, Mass.—Municipal ownership of water works, which has been on trial six years, is satisfactory. There has just been a reduction in rates which will save the consumers \$13,371 a year. Bath tub and extra faucet rates have been cut to \$3 and \$1 per year, respectively, a reduction of \$1 in each charge, and boarding house first faucets, baths and water closets will henceforth be \$8 per year, a reduction of \$2. During six years of municipal ownership new construction and improvements at the plant to the extent of \$46,000 of the bonded debt has been paid. The value of the plant is estimated at \$281,000, and the debt, \$211,000, a gain of \$70,000, which, with the saving to consumers by the recent reductions and the surplus taken by the town, makes the total gain and savings to date \$120,000.

To Abandon Water Supply

West Conshohockens, Pa.—The water supply is so bad that the health authorities have advised Town Council to abandon it and secure the supply from artesian wells.

STREET LIGHTING AND POWER

Gas Company May Leave Town Dark

Akron, O.—The State Supreme Court at Columbus has reversed the Summit County Circuit Court in the case of the East Ohio Gas Company against the city of Akron and thus declared that a natural gas company may abandon a city any time it chooses. The decision is one of the most important affecting the relations of the municipalities and the service corporations, rendered in Ohio in recent years. The franchise of the East Ohio Company in Akron provided for a review of the rates at stated periods. At the expiration of one of these periods the Council fixed a rate not satisfactory to the company, and it threatened to withdraw its supply of gas. The city asked an injunction denying the right of the company, with franchises in numerous cities, to abandon one without going out of the business entirely.

Offers Better Lights for Less Money

Bridgeport, Conn.—The United Illuminating Company has made the following proposition to the city:

That the present contract between the City of Bridgeport and the company be superseded by a new contract to take effect upon the execution of the same, which contract is to provide for the installation in the place of lamps now used of luminous arc or magnittite lamps, using four amperes at not less than 72 volts at the arc, at the following price: For 650 lamps, which is approximately the number now used by the city, at the rate of 20 cents per night per lamp for all night service, being \$73 per year per lamp. When the number of lights in use exceeds 700 the price to be at the rate of 19½ cents per lamp per night, being \$71.17 per year, the contract to continue in force until the expiration of a six months' notice in writing by either party to the other of its desire to terminate the same, provided that no such notice shall be given by either party to the other within 19 months from the execution of such contract. The details of the contract to be agreed upon between the representatives of the city and company.

Chicago Will Inspect Electric Meters

Chicago, Ill.—Inspection of electric meters by the city similar to the method of inspection of gas meters has been recommended by the Council Committee on Gas, Oil and Electric Light. The inspection is to be made under the supervision of the City Electrician, who shall designate an employe to do the work. If a patron of the company feels that his meter is not registering properly he shall make a deposit to cover the cost of inspection. If the meter is found correct he forfeits the deposit. If it favors the company the deposit will be returned and he will receive a refund on previous bills for 90 days.

Municipal Plant Must Not Sell Fixtures

Frankfort, Ind.—In the suit of J. S. Kelley against the city of Frankfort for an injunction to prevent the city from engaging in the sale of electric light bulbs to its patrons Judge Meade Vestal, of Noblesville, overruled a demurrer filed by the city to the complaint, holding that a city owning a municipal light plant had no right to engage in the sale of light bulbs and other fixtures to its patrons, the city thus trespassing on the rights of its business men.

City of Six Thousand Has Eighty-eight Street Lamps

Kendallville, Ind.—Kendallville claims to be the best lighted city of its size in Indiana. The population is between 5,000 and 6,000. A municipal lighting plant is operated on a paying basis. There are now 88 arc lamps in use on the streets, few intersections being without them.

Mayor Haynes' Franchise Idea

Minneapolis, Minn.—Mayor J. C. Haynes believes that a company seeking a franchise should first be given a license, revokable at the will of the Council, to construct a plant. It should be agreed beforehand that after this plant is constructed and the company thus shows its good faith, a franchise right for a certain fixed period should accrue. This would make unnecessary any bond for the faithful performance of the contract between the city and the company. "It might be argued against this plan," said the Mayor, "that the granting of a license to construct a plant and of a franchise contingent upon the satisfactory performance of the work would make it impossible for the operating company to secure money. I want to say that the city is not financing any corporation, but to be fair, I would suggest that there be a provision that should the Council during the license period revoke the license without just cause the city should pay to the promoters the amount invested, with 6 per cent interest. Upon this basis I think no concern would have any trouble obtaining sufficient money for its needs."

Gas or Electric Illumination Provided For

Scranton, Pa.—An ordinance has been prepared calling for proposals and specifications for street lighting which will permit competitive bids from electric and gas companies. The contract is to run for 5 or 10 years, and a bond of \$10,000 is required. Ornamental iron poles are to be erected for all new lights and in replacing old poles when so directed. A provision is included for illuminated street signs designating intersecting streets.

To Increase Electrical Fees

Washington, D. C.—Electrical Engineer Walter C. Allen has prepared a schedule of charges for inspecting electrical equipment which he thinks would be necessary in order to make his department self-supporting. At present all permits are issued at a uniform charge of \$2. According to the new plan, these will be increased in accordance with the size of the job. For work in an ordinary dwelling the fee under the new schedule would be between \$5 and \$10.

New Field for Municipal Plant

Westfield, Mass.—The Municipal Electric Light Department has entered a new field in furnishing electric heaters for houses and offices. Electric heating is something new to Westfield, although the town has sold light and power successfully for some time. The completion of the addition to the power plant now under contract will supply plenty of power to accommodate all who wish to use it, and there will be enough to furnish electricity for heating. It will be some time before the addition is finished, so that it will be impossible to install a large number of heaters at the present time.

FIRE AND POLICE

Good Records in Pistol Shooting

Baltimore, Md.—Baltimore's policemen are becoming expert marksmen with the revolver, so Marshal Farnan and Deputy Marshal Manning said, after they had looked over the target records made by members of the Police Department since October 6. In all, the revolver shooting averages 79 per cent better scores than were made last season. Out of C division, with Lieutenant Peregory of the mounted police as instructor, 47 men have qualified as expert revolver shots. C division includes captains, lieutenants, round sergeants and detectives.

Much Territory Covered by Patrol Wagon

Baltimore, Md.—The police Locomobile patrol has traveled 4,046 miles since May 19, when it was put in commission.

Fire Apparatus Dashes Off Bridge

Brockton, Mass.—When responding to a fire the ladder truck from Station 5 ran off an unfinished bridge on East Ashland street and dangerously injured the driver and a call fireman. The city is building a bridge over a gully 20 feet deep. One side of the bridge is finished and open for traffic, while the other is under construction. The driver misjudged the lights set as danger signals and drove through the open side.

Recommends Surgeon for Fire Department

San Francisco, Cal.—Acting on a report of the Fire Commissioner, Mayor E. R. Taylor, in a communication to the Board of Supervisors, has recommended that provision be made for the appointment of a surgeon to keep an eye on the sick and wounded of the Fire Department. The Police Department already has a surgeon employed at a salary of \$150 a month.

Light System for the Police

Pasadena, Cal.—The Municipal Lighting Department has finished a system of 15 red lights which is expected to add to the efficiency of the Police Department by making it possible to reach an officer at any time instead of having to wait until he calls up each half hour. The red lights are divided into two circuits, one on the north and the other on the south side of Colorado street. When an officer or officers are desired the lights are switched on and signal them to telephone to the station. Thus far the lights extend only throughout the business district.

Engine Collides with Trolley Car

Boston, Mass.—Seven persons were injured, two fire horses killed in a collision between engine 27 of Charlestown and an electric car at the corner of Elm and Bunker Hill streets, Charlestown, on the evening of October 19. Driver D. W. Towle was thrown from his seat completely through the car, crashing through the two glass panes and striking on the pavement on the other side of the car. The shaft of the engine was buried up to its whiffletree in the car. The side of the car was stripped open for 10 feet and the glass in nearly every window on that side shattered. A minute or two before the accident happened an alarm had been sounded. In order to reach the box engine 27 had to cross Bunker Hill street, on which the trolley cars run. As the engine approached the street with whistle blowing and bell ringing an outwardbound car apparently tried to pass in front of it. At any rate, the car was moving, but at slow speed, it is said. The driver attempted to turn his team, but could not do so sufficiently to avoid striking the car a slanting blow. Captain Hayes and Engineer Gilloghly, who were on the engine, and four passengers in the car were seriously hurt.

Fire Prevention Measures Bring Results

Rochester, N. Y.—The establishment of three new fire houses and the water works improvements, including the enlargement of mains in the business section, has made a favorable impression on the representatives of the National Board of Fire Underwriters, which will report in favor of removing the pink slip. There was a review of the Fire and Police Departments, at which the inspectors saw the full strength of the departments. Recommendations made recently by Herbert W. Pierce, Fire Marshal, for revisions of the building code were approved by the inspectors.

To Equip Apparatus with Motor Devices

Pittsburg, Pa.—City officials are considering plans to equip six of the big downtown fire-fighting appliances with motor propelling devices. The idea is to supplant horses in two trucks, two engines, the turret deluge and a hose wagon. Chief Engineer Miles S. Humphreys is a believer in the self-propelling idea because of its economies and facilities. He has given this matter much study and all the officials in the bureau have united on the modern idea. It is probable that the first six pieces of apparatus will be equipped some time next year. The idea of making big extension trucks self-propelling is in advance of anything in this country, although in Berlin, Germany, the ponderous machines are operated by auto power. Pittsburg's hills long have needed something faster and more certain than the horse, and if the idea proves successful it is highly probable that the Public Safety Department will include in its estimates of expenditures for the coming year the cost of making such improvements. The first changes in equipment are to be made at No. 19 engine house, in Water street, and No. 3 engine house, in Seventh avenue.

Fire Department Reorganized to Suit Auto Apparatus

Nahant, Mass.—In connection with the installation of two pieces of auto chemical apparatus, the Committee on Fire Protection has recommended the following changes in the organization of the Fire Department. The appointment of one permanent man to each of the two machines, at a salary not to exceed \$1,000 a year, who shall at all times, except for a two weeks' vacation, be at or near the engine house. They are to have charge of the apparatus and keep it in condition. On the sounding of an alarm they are to take their engines to the fire and then act under the direction of the Board of Engineers. Three men are to be designated as Captains. One man will be appointed to each apparatus, to be known as Lieutenant, at a salary of \$150 a year each. Ten call men will be appointed to each machine at salaries of \$50 a year each. The use of the old hook and ladder truck and one hose carriage is to be discontinued, except in case of emergency.

Chief Wants Better Fire Alarm System

San Francisco, Cal.—Chief Engineer P. H. Shaughnessy of the Fire Department has returned from a three months' visit to the East, during which he spent most of his time examining the high-pressure systems that are now in operation in New York, Philadelphia and Buffalo. He believes that San Francisco has outlined a system that will prove more effective than any of those he visited. "As far as the San Francisco Department is concerned," said the Chief, "I think it will compare favorably with any of the Eastern cities. We are, however, far behind with our alarm system. I think the boxes should be placed away from the building line in plain sight of every one. If we make this improvement I think when our new auxiliary system is in working order that we will be as well protected as any city in the Nation."

Mounted Traffic Squad for Washington

Washington, D. C.—Mounted policemen are soon to be placed on duty regulating traffic in the business section of the city, particularly along F street. The prevention of accidents is the main object of the traffic squad, and the special duties of its members will be to enforce the rules requiring drivers to keep to the right, to turn corners at safe rates of speed and without cutting them. Additions to the rules governing traffic will also be made. Police Chief Richard Sylvester favors a regulation directing vehicles for theatres and places of amusement to approach from one direction only. He would also have all vehicles on streets to carry lights after dark.

Tests for Police To Be Less Severe

Washington, D. C.—Educational tests for appointment to the police force of the National Capital are not to be as severe as in the past. Upon the recommendation of Major Richard Sylvester, Superintendent of Police, on the ground that the high standards heretofore required by the Civil Service Commission in the examinations have made it difficult to secure a full quota of men, the Commissioners have decided upon a new rating in examinations.

GOVERNMENT AND FINANCE

Mystery of Notes Against the Town

Framingham, Mass.—The discovery that two mysterious notes, aggregating \$50,000, are outstanding against the town, although no record of either note appears on the books of any town official, has led to an investigation by the Selectmen and to the appointment of a temporary Town Treasurer to take the place of John B. Lombard, who is dangerously ill at his home. In a statement given out in the presence of the Selectmen at conference Town Counsel Walter Adams said that two notes of \$25,000 each, held by Boston banks had been presented for payment. Further investigations have brought to light the fact that fraudulent notes for over \$300,000 have been issued, and it is believed that a conspiracy involving a number of persons has existed.

Commission Keeps City Expenses Within Limit

Haverhill, Mass.—Mayor Edward Moulton, after a week's study of a mass of figures, has announced that the city has lived within its \$12 tax limit. While some departments have exceeded their estimates, others have saved. Haverhill has been under a commission form of government for about a year. Previous to that time the \$12 limit was exceeded and deficits created.

Tacoma Adopts Commission Charter

Tacoma, Wash.—Tacoma has adopted the commission form of government by a vote of 4,034 to 1,002. The new charter provides for the election of a Mayor, four Councilmen and a Comptroller.

Take Up Commission Idea

Bay City, Mich.—Mayor Edward E. Evans brought up for discussion in the cabinet meeting in the Council Chambers the question of the commission form of government. A resolution passed Council a few days before, proposed by Alderman Fletcher, authorizing the Mayor to appoint a committee of five citizens to investigate the matter.

Discuss City Problems

Woodbury, N. J.—The Board of Trade discussed the question of "How Can the Tax Rate of the City Be Reduced Next Year?" D. O. Watkins said the rate this year was as high, if not higher, than any municipality in the State. He thought a good deal of city money went into the extension of water mains to sections where there are not enough customers. William T. Cooper suggested the turning of the profits from the Water Department into the general city fund, but Councilman Shivers said it required all this money to meet the bonds and interest. William Sithens suggested the abolition of the County Board of Taxation and return to the old-time Commissioners of Appeal. Cashier Graham thought a Commission, instead of Council, would do better work with the city's affairs. No definite conclusion was reached.

REFUSE COLLECTION AND DISPOSAL

Street Flushing System Improved

Minneapolis, Minn.—In conformity with the expressed wishes of the merchants of the retail district, the street flushing gangs will not work in the retail section until after 11 p. m. In the early part of the evening the crews will operate in the residence streets and the wholesale districts.

Clean Up Plague Spot

Washington, D. C.—Efforts to wipe out a plague spot in a densely populated network of public and private alleys in one square, where tuberculosis has been unduly prevalent, were outlined in a special report by Health Officer Woodward to Commissioner Macfarland. When it was discovered that tuberculosis was unduly prevalent in this area, a house-to-house inspection was determined on. Accumulations of filth were found in yards, sheds, vacant premises and private alleys that bred flies in great numbers. Defective roofs and defective cellar drainage were found that produced damp dwellings; six of the thirty-two homes were found structurally so bad as to warrant condemnation.

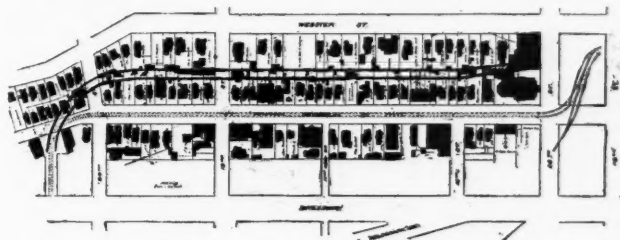
RAPID TRANSIT

Four-Cent Fare in Kansas City

Kansas City, Mo.—Two amendments to an ordinance for the extension of the street car franchise asked by the Metropolitan Street Railway Company have been adopted by a committee of the upper house of the City Council. One changes the fare from 5 cents to six tickets for a quarter, or 25 tickets for \$1, after January 1, 1913. The second does away with the city's right to a division of the street car company's profits. Both amendments were accepted by Bernard Corrigan, president of the company.

Prefer Railroad Through Back Lots

Oakland, Cal.—When the matter of granting a franchise to the South Pacific Coast Railway Company from Fourteenth street northward to a point between Nineteenth and Twentieth streets came before Council a plan favored by nearly all of the property owners was presented for having the line built through the middle of the block instead of



PLAN OF RIGHT OF WAY THROUGH PRIVATE PROPERTY

along Franklin street. The plan contemplates the sale of a strip 35 feet wide. At the start on Fourteenth street the proposed line runs between the premises now occupied by the livery stable and a church, taking a portion of each. From that northward the general location of the proposed right of way is on the rear portion of the lots that front on Franklin street.

Wants Cars Stopped on "Near Side"

Minneapolis, Minn.—Minneapolis automobile drivers intend to commence an agitation to compel street cars to stop on the "near," instead of the "far" side of the street. Philip R. Brooks, who is a leader of the move, declares many accidents would be avoided should the plan be adopted, especially in the business district. It is intended to bring the matter to the attention of the officials of the street railway company, and if they cannot be induced to make the change to appeal to the Council. "People would then know how to act," said Mr. Brooks. "Now the car dashes across the street before stopping, and accidents result because some people are always trying to get ahead of the car. If the car stopped on the near side its movements could be watched more accurately and people could time themselves in crossing. In the residence district it does not make so much difference; but in the congested downtown district there is much cause for complaint."

For Lower Car Steps

New Haven, Conn.—Shortly before the close of the annual convention of the King's Daughters and Sons, at Plymouth Church, considerable interest was aroused over a letter by Mrs. Caroline B. Buell, president of the Women's Christian Temperance Union, in which the writer urged the assemblage to take some action against the high steps on the trolley cars of the Connecticut Company. As a result of this letter and the discussion which followed, the following resolutions were unanimously adopted and sent to the officials of the trolley company:

Whereas, The steps on the trolley cars owned by the Connecticut railroad are so high that it is very difficult and oftentimes dangerous for women and children to enter and leave the same; therefore let it be

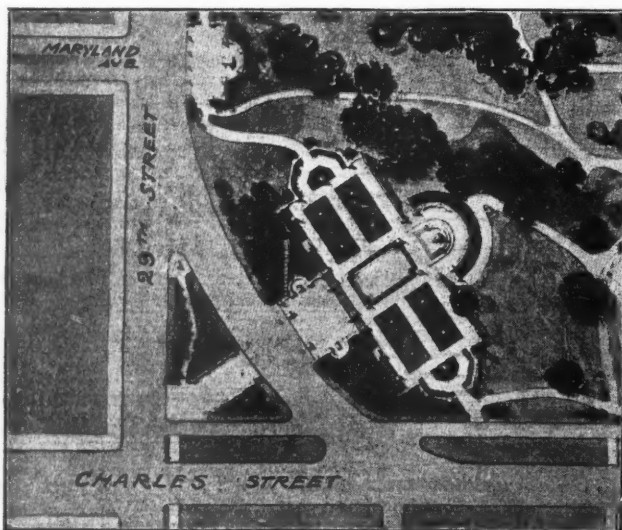
Resolved, That this organization petition the Consolidated railroad and respectfully ask that all cars under its control be so arranged as to better serve the interests of public health and safety.

"We women have suffered these high steps long enough," declared Mrs. Buell in her communication to the conference, and the 300 delegates present endorsed the above resolution emphatically.

MISCELLANEOUS

Proposed Sculptural Garden

Baltimore, Md.—The accompanying plan, made by Elliott & Emmart, architects and members of the Sculpture Garden Committee of the Municipal Art Society and approved by Frederick Law Olmsted, advisor to the Park Board, is for a garden to be established in Wymann Park. The garden will be artistically arranged and will include some famous pieces of sculpture in marble and bronze, both original sketches and replicas of well-known sculptors.



Courtesy Baltimore Sun

PLAN OF BALTIMORE SCULPTURAL GARDEN

Part of the money for the establishment of the garden was appropriated by the city, and the balance by the Municipal Art Society from the proceeds of the National Sculpture Show held in April, 1908.

City Offices Closed to Save Apple Crop

Canon City, Colo.—The city and county offices, schools and all business houses suspended business on the receipt of predictions from the weather forecaster of killing frost in the hope of saving the apple crop of Fremont County, valued at nearly \$1,000,000. The fruit was thrown to the ground under the trees and covered. As a result, the greatest fruit crop in the history of the county was saved through the extraordinary efforts of the entire community.

To Work on Streets for Lodging

Janesville, Wis.—Alderman Sheridan introduced an order which was passed unanimously to compel all persons who receive food and lodging in the city lock-up and who are not, at the time, under arrest to work on the streets from 7 a. m. to 10 a. m. each following morning.

Ordinance Regulates Building Operations

Oklahoma City, Okla.—In consequence of the death of a fireman who was thrown from a wagon that ran over a pile of rubbish in the street an ordinance regulating building operations has been passed. The ordinance is thought to be broad enough to cover building operations in the downtown section for many years to come. Among the points covered is the amount of space which will be allowed on the street for the use of the contractor in piling material, the amount of space which can be utilized on sidewalks by merchants and the use of areaways and the building of temporary sidewalks where such are necessary. One-third of the street, including the sidewalk, from the property line can be utilized by contractors on down-town structures. Building Commissioner Bennett spent eight months in drafting the ordinance which is strict in every respect.

Longest Highway Bridge in World Finished

Sandpoint, Ida.—What is said to be the longest wagon bridge in the world is that lately completed at Sandpoint, Idaho. It is a county bridge 10,360 feet long covering the Pend d'Oreille River and the lower end of a big lake. The draw across the river is 85 feet long and at an elevation of 75 feet above low water mark.

Takes Measures to Advance Interest of Philadelphia

Philadelphia, Pa.—At a citizens' meeting in Mayor J. E. Reyburn's office, held for the purpose of discussing practical measures for promoting the interests of Philadelphia, the following resolutions were passed:

Whereas, This meeting of citizens of Philadelphia interested in its progress, called by His Honor the Mayor of the city, hereby expresses its cordial approval of his desire and purpose to broaden the industrial outlook and increase the industrial efficiency of this great city, and in order that these ends may be achieved in the most effective manner, be it

Resolved, That this body request the Mayor to appoint such committees as in his judgment will promote the purpose of this meeting and the import of this resolution, including a committee on the development of the port of Philadelphia, a committee on the increase of terminal and transportation facilities, a committee to promote increased trade between Philadelphia and Latin America, a committee to secure a large exhibition hall, to be utilized for convention purposes, expositions, and other proper gatherings, a committee to encourage new manufacturing enterprises to locate in Philadelphia, a publicity committee to keep the world at large advised of the progress and standing of Philadelphia in the industrial world, and such other committees as in the judgment of the Mayor may produce the ends herein visioned.

Mayor Vetoes Telephone Increase

Rochester, N. Y.—Mayor H. H. Edgerton has vetoed the ordinance modifying the contract with the Home Telephone Company for permitting an increase in rates. In his message he admits that the existing rates are probably too low but he says that the increased rate may, during the life of the contract, which is perpetual, prove too high. The Mayor would have a provision inserted permitting the city to restore in part or in whole the present rates.

War On Tree Bugs Begun

Washington, D. C.—For the protection of the trees, which are the pride of the National Capital, the annual fall campaign for the destruction of the eggs of insects that despoil foliage and injure the trees has been started. Truman Lanham, Superintendent of Trees and Parkings, declared that he has mapped out a strenuous attack on the insects' eggs nestling in the bark of the trees; that investigations have been made to determine in what sections of the city the trees are infected, and that nothing will be left undone to destroy all of the eggs and thus prevent the usual crop of insects of all kinds next spring. Gasoline torches, commonly used by painters to remove the paint from woodwork, will be employed as the weapons for the campaign. A gang of ten men equipped with torches will be started out early next week to burn up the eggs on the bark of trees in the infected areas. A wagon with a plentiful supply of gasoline and other apparatus will accompany the men, so that they will be able to keep at the work continuously. It is expected that about 600 trees a day can be cleaned of the dangerous eggs by the gang. Several thousand trees will be divested of insects.

Would Reclaim Flats

Washington, D. C.—Members of the various citizens organizations and others are agitating the reclamation of the Anacostia flats mostly on sanitary grounds. The flats opposite Washington are great breeding places for mosquitos and are said to be responsible for the malaria prevailing in the southern and eastern section of the city. The draining and filling in of the flats would be desirable from an artistic standpoint and would fit in well with plans for increasing the wharfage area.

For Short-Term Franchises

Worcester, Mass.—Mayor James Logan has stated his creed regarding public service franchises in the following four articles:

First—That the streets of a city belong to all the people of that city, and that no mayor or city government or State commission has a right to barter them away.

Second—I believe that the day has passed forever when this city or any city should grant a perpetual franchise of any kind whatever to any public service corporation.

Third—In granting franchises for a term of years the number of years should be the shortest possible term that would allow the corporation proper time for development, giving to it a fair return for its development work and upon the capital invested in the enterprise.

Fourth—That the time to attach conditions to a public service franchise is when it is granted, and that the city ought not to be forced to plead for that which is rightfully its own.

LEGAL NEWS

A Summary and Notes of Recent Decisions—Rulings of Interest to Municipalities**Description of Street Improvement—Procedure**

Whittaker et al. vs. City of Deadwood et al.—Under Revised Police Code, providing that whenever a City Council shall deem it necessary to improve any street, alley or highway within the city limits, for which a special assessment is to be levied, the City Council shall by resolution declare such work necessary, the word "street" was used to indicate the subject of the improvement, and hence the city could not join two or more streets of unequal width in a single assessment district. A resolution for paving a street is invalid, unless it specifies the extent of the work by showing height, width and thickness of curbing to be set, or refers to plans and specifications therefor then on file. Revised Police Code provides that the City Auditor shall make an estimate of the work proposed to be done by the city, and before a levy by the City Council of any special tax shall report to the Council a schedule of all parcels or lots of land subject to the proposed assessment, and the amount of such tax or assessment which it may be necessary to levy on such lots or parcels of land. Held, that such requirement is mandatory, and a condition precedent to the making of a special assessment for street improvement.—Supreme Court of South Dakota, 122 N. W. R., 590.

Street Improvement—Insufficiency of Resolution

Crouse vs. Barrows et al.—Under Street Improvement Act, providing that a City Council's resolution of intention to improve a street shall contain a description of the work, a resolution reciting that it was the intention of the Council "to sidewalk and curb Date street" was fatally defective for failure to specify the kind of materials to be used in the sidewalk and the materials for the curb. Code of Civil Procedure, declaring that in pleading a determination of an officer or board it shall be sufficient to allege that the determination has been "duly given or made," did not sustain a complaint to foreclose a street assessment for constructing a sidewalk and curb, alleging that the city duly passed and adopted a resolution of intention to order the following street work to be done, to wit, "to sidewalk and curb Date street on both sides thereof, in the city of San Diego, California," between certain specified streets, as such allegation attempted to set out the resolution, and not its legal effect, and the resolution alleged was wholly insufficient.—Supreme Court of California, 103, P. R., 894.

Paving Petitions—Signatures

Newton et al. vs. Borough of Emporium.—Where a property owner wrote the word "conditionally" after his signature to a petition for the paving of a portion of a street, without specifying what the condition was, the property could not be counted in determining whether the petition was signed by the owners of the requisite two-thirds of the frontage; any condition invalidating such a signature. A signer of a petition for street paving may withdraw his signature by notice to the proper officers before action has been taken, but not after the Council has passed the authorizing ordinance. Where property abutting on a street to be paved is owned by tenants in common, all of them must sign the paving petition before the property can be counted as a part of the requisite frontage to authorize the improvement.—Supreme Court of Pennsylvania, 73 A. R. 984.

Vacation of Streets—Damages

Siddall vs. City of Philadelphia.—Where a street was laid out on a city plan on both sides of a railroad, but not across the right of way, there being a mere permissive crossing, the vacation of a portion of the street on one side of the railroad did not render the city liable for damages to owners of property abutting on the street on the other side, especially in the absence of proof that the crossing on the vacated side joined any well-defined road corresponding at any time with the platted lines of the street on that side.—Supreme Court of Pennsylvania, 73 A. R., 1013.

Damage to Building from Laying Sewer

Johnson vs. City of St. Louis.—The damage to a four-story brick building and its contents by the laying by the city of St. Louis of a sewer in an adjoining alley below the plane of the foundation of the building, after the owner knew in time to prop and protect his building that the sewer was to be laid, and that there was danger that it would cause his building to crack and settle, whereby the lot in its natural state would not have been caused to settle or crumble, but whereby the building was cracked, and it and its contents were injured to the amount of tens of thousands of dollars, is, according to the decisions of the Supreme Court of Missouri, *damnum absque injuria*, and the owner is not entitled to any compensation therefor under the amended Constitution of that State, which provides that private property shall not be taken or damaged for public use without just compensation. A private party is liable for damages caused to an adjoining lot by his removal of lateral support to such an extent that the lot in its natural state would settle or crumble, but for nothing more. If his removal of lateral support would not have caused the adjoining lot to settle or crumble in its natural state, he is not liable for damages which result because the superincumbent weight of buildings or other ponderous things contribute to the settlement of the lot.—Circuit Court of Appeals, 172 F. R., 31.

Street Railroads—Repairs to Paving

McKennie et al. vs. Charlottesville & A. Ry. Co. et al.—Where a city and a street railroad company, upon disagreeing as to the amount due the city from the company for its part of the expenses of repairing a street, referred the dispute to arbitrators, who found for the city for half the amount claimed, a decree sustaining the validity of the arbitration, but holding a provision in the contract invalid which made payment of a certain amount a discharge of all liability for further street paving under the company's charter, as well as a provision of the award releasing the company for five years from its obligation of paving on each side of its rails as required by its charter, did not compromise or diminish the city's authority to require the performance of the company's legal duties, within the code of 1904, forbidding the release of the holder of any franchise from any duty imposed on him without ten days' notice to the public by advertisement in a local paper.—Supreme Court of Appeals of Virginia, 65 S. E. R., 503.

Bonds—Statement as to Purposes

Ross, Mayor, et al. vs. Lipscomb et al.—Act February 14, 1908, authorizing bonds for public improvements in the town of G., required that the amount of the bonds to be voted on should be set forth in a notice of the election to be held to determine whether the bonds should be issued to extend the electric light plant or water works in the town or to secure additional water supply therefor, and Section 7 required the amount of the proposed bonds to be set forth in the notice of election on the question of issuing bonds to establish and build a system of sewerage for the town. Held, that such act required separate distinct statements as to the amount of the bonds for electric lights and water works and to establish a sewerage system, and hence an election held under a notice failing to submit the different propositions separately was insufficient to authorize the issuance of any of the bonds.—Supreme Court of South Carolina, 65 S. E. R., 451.

Sidewalk Accident—Contributory Negligence

Bedford City vs. Sitwell.—A traveler was injured by stepping from a carriage to the sidewalk by the end of the board giving way and the other end flying up. The sidewalk was constructed of boards laid on stringers about two feet above the level of the street. She knew that many boards were loose, and would tilt if stepped on outside of the stringer. She stepped on the walk without exercising any care either in seeing that the board on which she stepped was fastened to the stringers or by stepping on it inside of the stringers. Held, that she was guilty of contributory negligence as a matter of law.—Supreme Court of Appeals of Virginia, 65 S. E. R., 471.

NEWS OF THE SOCIETIES

American Society of Municipal Improvements.—The programme of the sixteenth annual convention has been announced by Secretary A. P. Folwell as follows:

First day, Tuesday, November 9. Morning session: 9 a. m., meeting of Executive Committee at headquarters, City Hall; 10 a. m., convention called to order. Address of welcome on behalf of the city of Little Rock, by His Honor, John H. Tuohy, Acting Mayor; and on behalf of the business interests by H. L. Remmel, President of the Board of Trade. Response by James Owen, President of the Society. Regular order of business.

Afternoon Session, 2 p. m.: Report of Committee on Municipal Franchises, "Effect of State Public Service Commissions upon Municipal Franchises," by C. C. Brown, Editor, Municipal Engineering, Chairman; "Proposed Franchise for a Public Service Corporation," by C. C. Brown; Report of Committee on Taxation and Assessment, by R. W. Ball, City Engineer, Henderson, Ky., Chairman; report of Committee on Review, by C. D. Pollock, Assistant Engineer, Bureau of Highways, New York, Chairman; report of Committee on Municipal Data and Statistics, by J. W. Howard, Consulting Engineer, New York, Chairman; report of Committee on Park Development and Maintenance, "The Function of the Playground in the Public Park," by A. M. Reynolds, Chief Engineer Essex County, N. J., Park Commission, Chairman; "Public Parks and Street Trees in City Planning," by Wm. Solotaroff, Superintendent, East Orange, Shade Tree Commission; "Parks as Conservators of Natural Resources," by E. A. Harper, Kansas City, Mo.; report of Committee on Fire Protection, by Alcide Chausse, City Architect and Superintendent of Buildings, Montreal, Chairman; report of Committee on Water Works and Water Supply—Review of the Year, by J. L. Ludlow, Consulting Engineer, Winston-Salem, N. C., Chairman; Water Supply Paper, by Morris R. Sherrerd, Chief Engineer, Dept. of Public Works, Newark, N. J.

Evening Session, 8 p. m.: Report of Committee on Sewerage and Sanitation, by Geo. C. Whipple, Consulting Engineer, New York, Chairman; "Some Problems of Trade Waste Disposal," by Robert Spurr Weston, Consulting Engineer, Boston, Mass.; "Disinfection of Sewage and Sewage Effluents," by Prof. Earl B. Phelps, Massachusetts Institute of Technology; "What the State of New Jersey is Doing to Purify Its Streams," by H. M. Herbert, Engineer of New Jersey State Board of Health; "Education in Municipal Sanitation," by Prof. Henry N. Ogden, Cornell University; "Materials for Sewer Inverts," by E. S. Rankin, Engineer of Sewers and Drains, Newark, N. J.; "Public Comfort Stations," by Horace Andrews, Consulting Engineer, Albany, N. Y.; report of Committee on City Government and Legislation, by Horace Andrews, Consulting Engineer, Albany, N. Y., Chairman; "Commission Government," by Wm. Doran, Commissioner of Streets and Public Property, Dallas, Texas; report of Committee on "Disposition of Garbage and Street Cleaning," "Recent Data from Municipalities," by Louis L. Tribus, Superintendent of Public Works, Richmond Borough, N. Y., Chairman; "Garbage Reduction and Disposal of the By-Products," by Charles S. Wheelwright, President International Continuous Filter Press Co.; "Refuse Disposal by High Temperature Destructor System," by Col. Wm. F. Morse; "Brick Pavements, Good and Bad" (with lantern slides), by Will P. Blair, Secretary National Paving Brick Manufacturers' Association.

Second day, Wednesday, November 10. Morning: Trip to industrial plants. Afternoon Session, 2.30 p. m.: "Some Notes on Toronto Pavements," by C. H. Rust, City Engineer, Toronto, Ont.; "Pavements and Their Grade Limitations in the Borough of The Bronx, New York," by S. C. Thompson, Prin. Ass't Engr., Bureau of Highways, Borough of the Bronx, New York; "Pavement Crowns and Concrete Foundations," by Geo. C. Warren, President Warren Bros. Company; "Pavements Without Concrete Base; Their Durability and Retention of Evenness," by Paul E. Green, Division Engineer of Streets, Chicago; "Gutter Culverts on Paved Streets," by F. V. P. Ellsworth, City Engineer, Hot Springs, Ark.; "Gutter Culverts on Paved Streets," by J. H. Weatherford, City Engineer, Memphis, Tenn.; "Care of Surface Water at Street Intersections," by S. D. Newton, City Engineer, Knoxville, Tenn. Evening: Reception and Luncheon.

Third Day, Thursday, November 11. Morning, 9 a. m.: "Creosote Oil for Wood Block Pavements," by J. N. Hazlehurst, Consulting Engineer, Atlanta, Ga.; "Bituminous Pavements on Macadam Base," by

Linn White, Engineer South Park Commission, Chicago, Ill.; "Bitumens Used in Pavements," by J. W. Howard, Consulting Engineer, New York; "Three Years' Experience with Oiling Roads," by F. A. Reimer, City Engineer, East Orange, N. J.; "Some Observations on Asphalt Paving and Some Present Needs," by Harry Tipper, of the Texas Company, New York; "Street Railway Location and Construction, and Paving Between Tracks," by J. N. Ambler, City Engineer, Winston, N. C.; "Advantages and Disadvantages of Alley Systems for Large Cities," by Wm. A. Howell, Chief Engineer of Street Department, Newark, N. J.; "Some Fundamentals," by F. D. Brown, City Engineer, Shawnee, Okla. Afternoon: Inspection of Little Rock. Evening, 8 p. m.: Final business; discussion of questions and postponed papers.

Fourth Day, Friday, November 12: Reception at Memphis, Tenn., by city officials and by Business Men's Club.

Many entertainment features have been arranged. On Wednesday morning, November 10, there will be a railroad trip to industrial plants of the city, visiting Iron Mountain Railroad shops, Arkansas cotton oil mill, St. Louis cotton compress, Ayer-Lord creosoting works, inspection of the industries of East Little Rock, trip around the Rock Island belt to the plant of the Arkansas Brick and Manufacturing Company, thence to power plant of Little Rock Railway and Electric Company, where luncheon will be served. Wednesday evening a reception and luncheon will be tendered to the society. Thursday afternoon a street car ride on special cars, to view streets and public improvements will be in order, and in the evening the final business session will be held. A special committee of ladies of Little Rock will look after the entertainment of the ladies attending the convention.

There will be the customary exhibit of municipal appliances and materials, which promises to be of unusual interest.

The membership of the local committees is as follows:

Program—E. A. Kingsley, W. F. Reichardt, D. A. Hegarty, D. P. Hill, S. A. Stearns and E. C. Beach.

Finance—Frank B. Gregg, Geo. W. Rogers, Chas. McKee, A. C. Read and W. S. Holt.

Ladies Executive—Mrs. E. A. Kingsley, Mrs. W. E. Lenon, Mrs. Geo. A. Stratman, Mrs. C. S. Cunningham and Mrs. I. O. Runyan.

Hotel—E. C. Taylor, Ervin Belaire, J. R. Frazier, W. M. Estep, M. P. Foster, B. L. Roberts, J. T. Jarvell, Frank M. Fletcher, C. A. Bright and W. S. Holt.

The officers of the society for 1908-1909 are as follows:

President, James Owen, Montclair, N. J.; First Vice-President, Julian Kendrick, Birmingham, Ala.; Second Vice-President, Fred Giddings, Atchison, Kan.; Third Vice-President, E. A. Kingsley, Little Rock, Ark.; Secretary, A. Prescott Folwell, New York, N. Y.; Treasurer, E. S. Rankin, Newark, N. J.

Technical Publicity Association.

The first of the association's monthly meetings for 1909-1910 was held October 14 in its headquarters, 14 Gramercy Park, New York. Charles S. Redfield, president, was toastmaster. George French, editor of "Advertising and Selling," delivered an address, presenting the psychological and artistic aspect of advertising. The effect of advertising as preparing a purchaser's mind through suggestion to act favorably on a proposition presented later by a salesman was discussed. Mr. French also took up the matter of artistic and effective forms, and explained how advertisements should be so framed as not to overtax the limited capacity of the eye to take in the desired impression.

American Institute of Architects, Illinois Chapter.—At the meeting October 11 the Commercial Club's plan for improving Chicago, drawn by Daniel H. Burnham, was unanimously endorsed.

Alabama Good Roads Association.

About 400 delegates attended the convention at Birmingham, Ala., October 14. The meeting was called to order by John W. O'Neill, chairman of the committee of arrangements. Mayor Frank P. O'Brien welcomed the convention. President John Craft responded and took charge of the convention. The secretary, J. A. Rountree, read letters from a number of prominent men interested in the movement, among them M. W. Finley and B. F. Yoakum. The following addresses were made:

D. H. Winslow, of Washington, D. C., United States Government road expert, "Essentials of Road Building"; Gov. B. B. Comer on "Good Roads"; Arthur C. Jackson, of Chicago, President National Good Roads Association, on "State and National Highways"; M. V. Richards, of Washington, D. C., Land and Emigration Agent Southern Railway, on "Good Roads and the Farmer"; Senators J. H. Bankhead and Joseph F. Johnston, and Congressmen Oscar Underwood, Henry D. Clayton, William Richardson, S. H. Dent, Jr., W. B. Craig, John L. Burnett, J. Thomas Heflin, on "Good Roads and Federal Aid"; Will P. Blair, of Indianapolis, Secretary of National Paving Brick Manufacturers' Association, on "Good Roads and Good Streets"; Judge William E. Skeggs, of Morgan County, on "What We Are Doing in Our County to Build Good Roads," followed by three-minute talks by each Probate Judge from the 67 Counties or a delegate from each County; Hon. J. A. Wilkerson, Commissioner of Agriculture, on "Alabama's Road System"; Prof. Edgar B. Kay, State University, "Chert Roads"; Prof. G. N. Mitcham, of Alabama Polytechnic Institute, on "Road Building"; Dr. W. F. Prouty, Chief Assistant State Geological Survey, on "Good Roads Materials."

The following officers were elected: John Craft, of Mobile, President; John W. O'Neill, of Jefferson, First Vice-President; W. M. Drennen, of Jefferson, Second Vice-President; M. B. Welborn, of Calhoun, Third Vice-President; J. Asa Rountree, of Jefferson, Secretary-Treasurer.

Executive Committee—First district, H. K. Milner; second district, John Gamble; Troy; third district, H. M. Wilson, Opelika; fourth district, V. B. Atkins, Selma; fifth district, J. W. Overton, Wedowee; sixth district, J. H. Bankhead, Jasper; seventh district, R. A. Mitchell, Gadsden; eighth district, William E. Skeggs, Decatur; ninth district, Oscar W. Underwood, Birmingham.

District Vice-Presidents—First district, Judge Hasty, Marengo; second district, J. H. Cook, Montgomery; third district, L. L. Sessions, Dale; fourth district, J. F. Fain, Calhoun; fifth district, A. J. Driver, Chambers; sixth district, W. H. Ralford, Tuscaloosa; seventh district, W. T. Brown, St. Clair; eighth district, Winston F. Garth, Madison; ninth district, Judge Kelton, Blount.

The association declared itself in favor of the creation of a department of State highways and of organization in the respective counties.

Anti-Smoke League of Chicago.

About 50 civic organizations held a meeting at the Woman's Club, Fine Arts Building, Chicago, October 17, for the purpose of organizing a movement for a cleaner Chicago, for the abolition of the smoke nuisance and the electrification of all railroad terminals. Among the speakers were: Alderman Milton J. Foreman, Alderman Nicholas R. Finn, Alderman B. W. Snow, John Callan O'Laughlin, of the Chicago "Tribune"; Smoke Inspector Paul Bird; Mrs. Edward L. Upton, president of the Chicago Woman's Club, and Mrs. John O'Connor.

Illinois Conference of Charities and Corrections.

At the fourteenth annual convention, held in Peoria, Prof. James H. Tufts, University of Chicago, read a paper on "Housing in Illinois Cities," based on inspections made by him and his assistants in Alton, East St. Louis, Joliet, Peoria, Quincy and Springfield. In all these cities sections were found where poor people, mostly foreigners, lived in unsanitary dwellings without water or sewers.

New Jersey State Civic Federation.—The annual meeting was held in the Public Library, Newark, N. J., October 15. Nearly all the evening session was devoted to the State water supply question. Papers were read by Henry B. Kummel, State Geologist, Trenton, and Samuel Phillips, Dundee Lake. Secretary Edwin K. Sumerwell read communications on the same question from Attorney-General Edmond Wilson, Richard P. Jenkinson, J. Albert Stone, and others. A resolution was passed declaring the Federation in favor of abandoning the Morris Canal through the cities of Newark and Jersey City. The afternoon session was devoted to the subject of taxation. Addresses were made by Lawson Purdy, New York, N. Y.; John F. Sutro, West New York, and John A. Burgan, of the Hammonton Board of Trade. A resolution was passed favoring uniform municipal accounting. The following officers were re-elected: President, Adolph Roeder, of Orange; secretary, Edwin K. Sumerwell, of East Orange, and treasurer, Charles H. Ingersoll, of South Orange, and the following vice-presidents: Isaac H. Blanchard, of Orange; Henry J. Sage, of Pompton Plains; Thomas Walker, Newark; P. Henry De Pew, Plainfield; A. R. Taylor, Nutley; Dr. Bruce M. Keator, Asbury Park; Francis Q. Lay, West New York; John McGregor Littell, Mt. Arlington; William B. DuBois, Bayonne; Henry Thompson, Jersey City, and Henry B. Kummel, of Trenton. President Roeder announced that the Federation had arranged a lecture bureau, which will supply free speakers for civic meetings throughout the State during the winter. Among those on the list are: Theodore L. Bierck, Jersey City; Everett Colby, Orange; Robert Carey, Jersey City; F. R. Low, Mayor of Passaic; William Fellowes Morgan, M. C. Leonard, Arlington; Philip C. Walsh, Jr., Newark; Forrest A. Heath, Jersey City; George L. Rushby, New York City; John Z. White, Chicago, Ill.; Borden D. Whiting, Newark; John S. Gibson, Newark; Dan Fellows Platt, Englewood; R. Henry Depew, New York City; H. H. Dawson, Newark; Alden Freeman, East Orange; William J. McKiernan, Newark; Rev. Dr. W. Y. Chapman, Newark; J. Albert Stowe, Arlington; W. P. Martin, Newark; Edward W. Townsend, Upper Montclair; James G. Blauvelt, Paterson; Adolph Roeder, Orange; Mark A. Sullivan, Jersey City; Herman B. Walker, Newark; John A. Burgan, Hammonton; George L. Record, Jersey City; Thomas M. Debevoise, Summit; Frank H. Sommer, Newark; Henry Marelli, Paterson; H. V. Osborne, Newark; Andrew Knox, Jersey City.

Pennsylvania Association of County Commissioners.—The twenty-third annual convention was held in Gettysburg October 12-13. State Highway Commissioner Joseph W. Hunter was among those who addressed the convention. He stated that the average cost of constructing a State highway was \$9,500. The following officers were elected: President, P. H. Dewey, Wellsboro; vice-president, Swithin Shortleage, Landenburg; secretary, Harry A. Stevenson, Lock Haven; treasurer, John L. Dunlap, Bellefonte.

Public Health Association of Rochester, N. Y.—The association has on exhibition a model of the Day Camp, situated on the grounds of the Municipal Hospital, for the treatment of incipient cases of tuberculosis.

Municipal Engineers of the City of New York.—At the regular meeting in the Engineering Societies' Building, October 27, 8:15 p. m., a paper will be presented by Thomas H. Wiggin on "The Design of Pressure Tunnels of the Board of Water Supply." The paper will be illustrated by lantern slides.

On invitation of the Board of Water Supply of the City of New York and of Messrs. McArthur Brothers Company and Winston & Co., contractors, this society will visit the Ashokan Dam on Saturday, November 6, leaving foot of Desbrosses street at 9:30 a. m., West Forty-second street at 9:45 a. m. and Weehawken at 10 a. m., rain or shine, reaching Brown's Station at 1 p. m. Lunch will be served on the train en route. The train will arrive in New York on the return trip about 7:30 p. m. This is a rare opportunity to visit one of the two highest masonry dams in the world while the work is in a very interesting condition. Masonry is being laid at the rate of over 1,000 cubic yards per day and probably the work in all classes is now progressing at the maximum rate. Ladies are welcome. Tickets must be procured prior to November 1, and can only be obtained from members of the committee. All checks should be made payable to G. L. Christian, chairman, 236 East 238th street, New York, N. Y. C. D. Pollock is Secretary of the society.

Municipal League of Steelton, Pa.—Steps to better the civic and industrial conditions of the borough were taken by the formation of a league. The following officers were elected: President, H. H. Howard; first vice-president, Robert M. Rutherford; second vice-president, W. H. H. Sieg; secretary, H. L. Litzenberg; treasurer, William H. Nell. The committee also recommended that an executive committee to consist of the following men be chosen: Dr. W. H. Seibert, Prof. L. E. McGinnes, Henry G. Posey, M. A. Cumber, T. T. McEntee and F. D. Carney.

Harvard Engineering Society of New York.—The following calendar for 1909-1910 has been announced:

October 29—Excursion to Brooklyn Navy Yard; meeting in the evening at the Harvard Club; address by Mr. J. R. Finlay. January 14—Excursion to plant of the Raritan Copper Works, Perth Amboy, N. J.; meeting in the evening at the Harvard Club; address by Mr. B. B. Thayer, President of the Society. February 25—Annual dinner at the Harvard Club; President Lowell, of Harvard University, has accepted an invitation to be present. April 15—Excursion to some work under construction by the Foundation Company; meeting in the evening at the Harvard Club; address by Mr. Franklin Remington. June 10—Excursion; annual meeting in the evening at the Harvard Club.

Board of Trade of Newark, N. J.—At a meeting October 13 in the Public Library Dr. George A. Soper, president of the Metropolitan Sewerage Commission of New York, spoke on the subject of the pollution of New York Bay by sewage. In the discussion which followed Edlow W. Harrison, engineer for the Passaic Valley Sewerage Commission, spoke in defense of the plans of the Commission.

Colonial Hill Improvement League of Dallas, Tex.—At a meeting October 15 plans were made for the promotion of public improvements and officers were elected as follows: President, Wallie Felton; vice-president, C. C. Lane; secretary, S. R. Coleman; treasurer, J. G. Fry.

Fire Chiefs' Club of Massachusetts.—The first fall meeting was held at the Copley Square Hotel, Boston, October 20. The topic for discussion was: "In cities and towns that employ permanent and call firemen, what proportion should be assigned to the different companies, engine with hose wagon, ladder and chemical, combination hose and chemical, and plain hose company?" Chief Thomas A. Harris, Lynn, opened the discussion.

Calendar of Meetings

October 26-29. National Roadmakers' Association.—Annual Convention, Columbus, O.

October 29-30. American Electro-Chemical Society.—Annual meeting, New York, N. Y.—Jos. W. Richards, Secretary, South Bethlehem, Pa.

November 3. Lakes-to-Gulf Deep Waterway Convention.—Convention, New Orleans, La.

November 9-11. American Society of Municipal Improvements.—Annual convention, Little Rock, Ark.—A. Prescott Folwell, Secretary, 241 W. 39th St., New York, N. Y.

November 15-18. American Civic Association.—Fifth annual convention, Cincinnati, Ohio.

November 15-18. National Municipal League.—Annual meeting, Cincinnati, O.—Clinton Rogers Woodruff, Secretary, 705 North American Building, Philadelphia, Pa.

December 3-4. New Jersey Sanitary Association.—Annual meeting, Lakewood, N. J.—J. A. Exton, Secretary, 75 Beach st., Arlington, N. J.

December 7-10. American Society of Mechanical Engineers.—Annual meeting, New York, N. Y.—C. M. Rice, Secretary, 29 W. 39th st., New York, N. Y.

December 14-15. Association of American Portland Cement Manufacturers.—Annual meeting, New York, N. Y.—Percy H. Wilson, Secretary, Land Title Building, Philadelphia, Pa.

INCORPORATIONS

The Bonna Pipe Co., Trenton, N. J.; contracts, bridges, roads, highways, etc.; contracting, etc.; capital, \$100,000. Incorporators: John D. O'Brien, London, England; Ellis L. Pierson, Harry R. Wilson, both of Trenton, N. J.

Cady Construction Co., Chicago, Ill.; construction and contracting work; capital, \$25,000. Incorporators: Lewis V. Cady, E. J. Snackenber, Edward D. Pray, Priggle, Morthrup & Terwillinger, all of Chicago, Ill.

Cowles-MacDowell Engineering Co., Chicago, Ill.; engineering and contracting; capital, \$25,000. Incorporators: Irving Cowles, Ernest H. MacDowell, Ewald J. Pfeiffer, Will C. Moody, No. 153 La Salle Street, Chicago, Ill.

Dixie Contracting Co., Nashville, Tenn.; capital, \$20,000. Incorporators: W. H. Whorley, B. F. Fields, D. D. Blake, Jr., and others.

The Garoga Water Power & Transmission Co., Gloversville, N. Y.; electricity for light, heat and power; capital, \$50,000. Incorporators: Mortimer Everest, Gloversville, N. Y.; William C. Dunlop, 60 Wall Street, New York; H. M. Brinkerhoff, Briar Cliff, N. J.

Illinois Consumers Light Co., Champaign, Ill.; operate a heat, light and power plant; capital, \$2,500. Incorporators: Geo. M. Mattis, W. H. Carnahan and Chas. Zilly, all of Chicago.

Iowa Light & Traction Co., Chicago, Ill.; maintain an Illinois office; capital, \$500,000. Incorporators: South Dakota Corporation, Joseph W. Gillis, 153 La Salle Street, Chicago, Ill.

Mineville Light, Heat & Power Co., Moriah, N. Y.; manufacture electricity for light, heat and power; capital, \$10,000. Incorporators: Shedon Norton, Solomon LeFebvre, Samuel Dongan, all of Mineville, N. Y.

New Bedford Valve Co., New Bedford, Mass.; manufacturing and sale of valves; capital, \$5,000. Incorporators: Clark W. Holcomb, Allie W. Olney and Joseph T. Murphy, all of New Bedford.

Sheffield Shale Tile Co., Sheffield, Ill.; manufacture brick, etc.; capital, \$45,000. Incorporators: Albert W. Boyden, George W. Boyden and Charles W. Boyden, all of Sheffield, Ill.

PERSONALS

BEEM, J. P., Marengo, Ia., has been chosen Mayor, to succeed A. M. Henderson, removed, under the provisions of the Corson law, for alleged intoxication. Mr. Beem was Mayor eight years ago, and has served two terms as County Attorney of Iowa County.

CAMPEN, GEORGE L., Omaha, Neb., Assistant City Engineer, has received a medal in acknowledgment of his services as Superintendent of Public Works in the Canal Zone during 1905-7.

CHANEY, GEORGE O., Salt Lake City, Utah, has been promoted to City Engineer from Chief Assistant, to succeed Louis C. Kelsey, resigned.

CHATFIELD, JAMES M., Thomaston, Conn., has been elected Chief of the Fire Department, with Wallace Neubert and Martin Nicholson as his assistants, while August E. Blakeslee has been chosen as President of the Board of Fire Commissioners and L. Perly Jones, Secretary.

DUHIG, THOMAS E., South Bethlehem, Pa., has been elected Chief of the Fire Department by Town Council for three years, under the rotation system, which decrees that each of the four companies shall have the Chief in succeeding terms; there are 500 volunteers under his charge.

GOWAN, ROBERT S., Ossining, N. Y., civil engineer, formerly employed on the Boston Water Works, the Croton Aqueduct and the Cornell Dam, died October 19.

HALL, LEVANT O., Mayor of Muskegon Heights, Mich., has resigned his position as Mayor and also as Chairman of the Muskegon County Board of Supervisors, to take up farming on his large estate in Berrien County.

HOWSE, HILARY E., Nashville, Tenn., has been elected Mayor over C. D. Johnson, being the candidate of the anti-prohibition or Liberal element; J. D. Alexander and J. Morgan Wilkerson were elected members of the Board of Public Works.

INGERSOLL, G. B., Eatonville, Wash., has been elected Mayor of the newly incorporated town, and J. H. Benston, Treasurer.

JAMES, THOMAS E., Albany, Ga., Chief of the Fire Department since 1893 and a member since 1882, died October 15 following a cold contracted at a fire.

KIBBE, L. G., Carteret, N. J., has resigned as Treasurer of the Wheeler Condenser & Engineering Company, in order to take an active part in the management of the Warren Steam Pump Company, of Warren, Mass. He will be located at the head offices of the company at Warren.

KING, EDWARD E., East Hartford, Conn., has been appointed Superintendent of Streets.

LAUZON, F. H., Tacoma, Wash., City Electrician, has been exonerated from the various charges made of poor business management of the municipal plant.

MAIN, WALTER A., Orange, Conn., has been elected First Selectman. Elford C. Russell and Greene Kendrick have been elected Second and Third Selectmen respectively.

MONTGOMERY, W. T., Floydada, Tex., has taken the oath of office as Mayor.

STANGER, A. J., Alderman of Weatherford, Tex., has resigned, giving as the reason "the cursed contrariness" of the other members of the City Council because they object to the immediate construction of a bridge which has been authorized by the voters and provided for in a bond measure.

THOMPSON, CORLIES W., Red Bank, N. J., organizer and first Chief of the Fire Department, died October 16.

WILKERSON, S. R., Mayor of Jacksonville, Ala., died October 14.

TRADE NOTES

Cast-Iron Pipe.—Chicago: Most of the business in the market comes from the Southern territory. Quotations: 4-inch, \$28.50; 6 to 12-inch, \$27.50; 16-inch and up, \$26.50. Birmingham: The quotations here given are believed to be the lowest available and some manufacturers are quoting higher prices: 4 to 6-inch, \$26; 8 to 12-inch, \$25; over 12-inch, average \$24. New York—Quotations: 6-inch, carload lots, \$25 to \$25.50.

Lead.—Lead is firmer, and there has been more buying. Outside lots have been cleaned up, and the general trade is asking the price established by the American Smelting and Refining Company, which remains at 4.40c. The buying has been mostly in carload lots, and no big sales were recorded. Inquiries show that the demand will continue for a time, and it is thought that the price will be kept up. In St. Louis lead is selling for 4.25c., and there is no cutting in price.

New York Electrical Show.—Among the electric lamps shown at the exhibition in Madison Square Garden, in addition to those described in the MUNICIPAL JOURNAL AND ENGINEER October 20, were the following: The Polar Flaming Arc Lamp, for direct and alternating current circuits, manufactured by Box Bros. & Co., 126 Lafayette street, New York, N. Y., made for either indoor or outdoor use. Inclined carbons are used, secured in metal holders of ample strength and size to prevent heating. The holders slide down substantial guide rods and the carbon ends converge at a point immediately below the economizer in the globe. The lamp works on the differential principle, that is, the feeding mechanism is actuated by the resultant pull of a series and shunt magnet working at right angles to each other. The feeding mechanism is separate from the main body of the lamp, contained in a separate weather and dustproof case, provided with a rubber gas tube and sealed before sending out. The main body of the lamp is below the feeding mechanism and is readily accessible for trimming by simply lowering the case by means of thumb hooks. The arc burns in an economizer, which takes the place of the inner globe in an ordinary enclosed arc lamp. A ventilating ash tray is designed to keep the interior of the globe free from deposits. The lamp is said to consume 0.2 of a watt per candle.

The Radiante Lamp, for direct current circuits, also exhibited by Fox Bros. & Co., 126 Lafayette street, New York, N. Y., gives a white, steady light. Vertical rods of pure black carbon are used, the lower being stationary. Carbons are screwed on metal holders of ample size. The proper trimming length of the lower carbon is marked on the lower carbon holder, which is centered accurately with the upper holder, insuring perfect alignment of carbon rods. The feeding mechanism is a magnet working against gravity. The control is accurate and gives a steady light. The arc is only partially enclosed, the object being to obtain long life of carbons and avoid the disadvantages of the completely enclosed arc lamps, such as bluish color and unsteadiness of flame. The lamp is said to consume 0.5 of a watt per candle-power.

The Sumay Arc, manufactured by the Sumay Electric Lamp Manufacturing

Company, 109 West Forty-second street, New York, N. Y., is an enclosed arc lamp, claimed to be stripped of all complications and useless parts, and possessing unique features of construction, which place it in a class by itself. The lamp, which gives a white light, is said to consume 1/4 watts per mean hemispherical candle. It is claimed to burn 80 hours at one trim of one 7 mm x 300 mm carbon, or 120 hours on one trim of one 8 mm x 300 mm carbon. The lamp is decorative in appearance.

The Stillvan High Efficiency Electric Arc Lamp, manufactured by the Stillwell-Van Demark Company, 194 Broadway, New York, N. Y., is suitable for inside or outside use in multiple on direct or alternating current. This lamp differs from others in that the rigidity of the lamp does not depend upon a single tube placed in the center. Two parallel rods run the length of the lamp, to which the various parts are rigidly secured. This rigid construction is said to reduce to a minimum trouble which is likely to occur owing to the parts getting out of alignment. The controlling mechanism is of a patented electromagnet type. The upper carbon holder guide is of the parallel rod construction. The globe is held in position by a wire bail. The globe is easily removed for the purpose of trimming. As to cost of operating it is claimed that with current at 10 cents per kilowatt hour it costs less than 5 cents an hour to operate the standard four-ampere lamp, including cost of carbon renewals and labor of trimming.

Heany Inventions.—The Heany fire-proof asbestos covered magnet wire for heavy duty electrical apparatus was exhibited at the Electrical Show, Madison Square Garden, New York, N. Y., by the Heany Fire-Proof Wire Company, with offices at 25 Broad street, New York. The company also says: "The greatest advance in solving the lighting problem since the invention of the carbon lamp, about 20 years ago, has been made by the new Heany tungsten lamp. It is the only perfect tungsten lamp on the market, as no other one will burn in any position and give an equally efficient service."

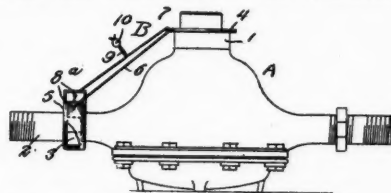
Foreclosure Order.—Judge Lacombe, in an order filed October 15 in the United States Circuit Court, affirmed the decree of foreclosure granted October 12 by Judge Holland in the Circuit Court of the Eastern District of Pennsylvania in the suit of the Knickerbocker Trust Company against the McCall Ferry Power Company, which has its main offices in New York. To secure an issue of \$10,000,000 in bonds the McCall Ferry Power Company on June 15 executed to the Knickerbocker Trust Company a general mortgage covering all its property. The action was brought in the Federal Court of the Eastern District of Pennsylvania because there was a default in the payment of interest, on December 15, 1908, and since then the principal on the bond issue, which amounted to \$9,027,000, had become due. Judge Lacombe's order directs that the principal and interest, amounting to \$9,226,554.01, be paid to the Knickerbocker Trust Company within 10 days.

New Manager.—The Eureka Fire Hose Mfg. Co. announces that Geo. F. Hand, formerly connected with the Gutta Percha & Rubber Mfg. Co., Chicago, Ill., has succeeded Clay Baird as Manager of the Chicago office of the company, 140 Dearborn street.

PATENT CLAIMS

936,862. **METER SEAL.** Emanuel H. Burge and Charles Londick, Three Rivers, Mich. Serial No. 467,093.

In combination with a water meter embodying a cap closing the registering mechanism, and a coupling nut for connecting



the meter to the service pipe, a member fitted to said cap, a U-shaped member embracing three edges and opposite sides of the coupling nut and placed in position thereon by a relative sliding movement of the nut through the open side, connecting means between the two members and preventing their relative displacement, and a seal closing the open end of the U-shaped member and positively connected with the side pieces thereof and serving to prevent removal of the protecting means without detection.

937,582. **METHOD OF CASTING PIPE.** Daniel B. Dimick, Birmingham, Ala., assignor to American Casting Company, Birmingham, Ala., a Corporation of Alabama. Serial No. 406,495.

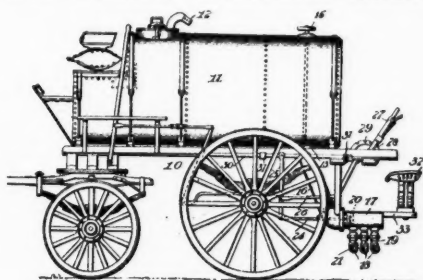
The method of casting pipe which consists in simultaneously forming the inner and outer mold members from a double set of patterns comprising a barrel portion and a sectional bell portion, withdrawing said barrel portion of the double set of patterns and laterally removing the bell portion of the patterns, then lowering the outer mold member over the inner mold member and introducing molten metal within the formed mold, substantially as described.

937,210. **PROCESS OF PREPARING POTABLE WATERS.** John T. Harris, New York, N. Y. Serial No. 344,323.

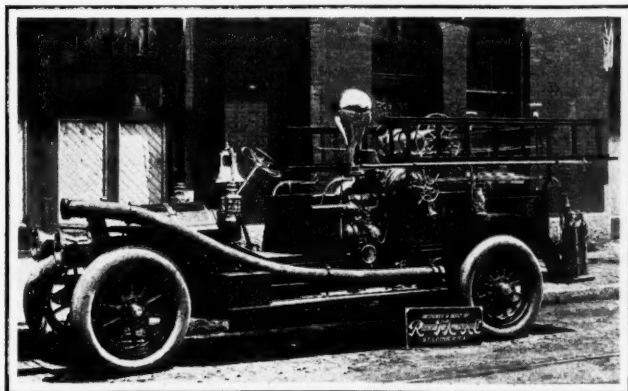
The method of preparing potable waters which consists in electrolyzing water in the presence of an anode of a trivalent metal yielding a colloidal hydroxide and simultaneously subjecting the water to the action of a compound of copper.

936,716. **ROAD OILER.** Charles M. Haeske, South Bend, Ind. Serial No. 473,565.

A road oiler comprising a portable tank, distributing heads communicating with said tank, a plurality of partitioned sprinkler



tubes communicating with said distributing heads, means for moving the partitions of said tubes, valves in said distributing heads and controlling the discharge to said sprinkler tubes, a bar for operating each valve, a hand lever controlling said bar, a guide rod connected with said operating bar, and means for guiding said rod.



FIRE ENGINE, CHEMICAL AND HOSE WAGON COMBINED

MUNICIPAL APPLIANCES

Automobile Triple Combination Fire Apparatus

THE Robinson Fire Apparatus Manufacturing Company, 4250 North Twentieth street, St. Louis, Mo., manufactures an automobile triple combination chemical engine, hose wagon and fire engine. The specifications of this apparatus are as follows:

Construction.—Motive power: Thomas gasoline engine, 70 h.p. Speed: 5 to 50 miles per hour. Cylinders: Four. Ignition: Two separate and distinct systems. Cooling: Gear pump, extra large water space and large radiator; Carburetor, special automatic. Lubrication: Mechanical eight-point oiler, feed cylinders, crank case and chains. Transmission gears packed in grease; oil or grease cups at all important bearings. Control: Spark and throttle on steering wheel, also foot button accelerator. Fuel capacity: 20 gallons. Ball bearings throughout engine transmission. Transmission: Four speeds forward and reverse, sliding gear selective type. Brakes: Internal expanding on rear wheels; external contracting on countershaft. Dash site feed. Gasoline tank: Copper, with partition to prevent generating gas in tank, and arranged for gravity feed. Tread: Standard 56 inches. Drive: Double chain on solid rear axle with drop forged steel sprockets. Engine control: Lever on instant means to operate fire pump. Wheel base: 140 inches. Hose body: Ash; top edge iron bound; bottom and sides reinforced with iron; bottom of hard wood. Bottom and sides of rear end to be fitted with friction rollers made of hardwood or pipe. Brass flanges. Bottom rollers to be placed about six inches below top of hose body. Capacity of hose body, 1,000 feet of 2½-in. Pilot seat: To be placed in front, large enough to accommodate two persons. Steps: Side steps to be placed between front and rear wheels; to be covered with rubber corrugated matting; rear steps to be 17 inches wide; all steps are to have metal nosing; two hardwood pipe cones for play-pipes and acid holder to be placed on steps. Steps not less than 18 inches from the ground to bottom of step when loaded. Fenders for wheels. Axles: Annular ball bearing. Springs: Best steel and ample strength to carry the load intended, twelve (12) 2½-in. front and rear. Wheels: Wood, best grade Fire Department Artillery, with brass hub caps to be secured with cap screws, not less than 40 inches, including tires. Spokes 2½ inches. Frame: Pressed steel. Tires: Diamond or Fisk quick demountable rubber tires, 40x6 inches. Tool box: One large tool box made of hardwood to be placed on front of rear steps. Railing: To be of polished heavy brass tubing, mounted on polished stanchions, and to extend above the sides of the body to the rear step; end of the body at the rear are two polished brass standards with cross bar. At the top of each standard there is a bracket arranged so that an electric lamp can be used instead of oil torches, same to be wired throughout standards and ready for lights.

Chemical Engine Equipment.—The chemical engine is to consist of one forty-gallon Robinson chemical engine tank, made of best Lake Superior hammered 6½-lb. copper, heavily tinned on inside, double riveted, made in the most substantial manner and thoroughly tested. Tank is constructed in the following manner: Improved fan agitator entire length of tank, revolved by brass scroll wheel. This agitator thoroughly dissolves the soda and prevents its settling in the bottom of the tank. Independent acid dump at end of tank, operated by lever. Seamless drawn lead, copper jacketed, acid receptacle secured in top of tank by leaded brass container. Acid receptacle has fixed handle for ready removal. The sealing device is made of heavy square thread in releasing wheel on cap, which acts on a ground taper stopper. Filling opening measures eight inches in the clear. There is a pressure gauge which shows the amount of pressure generated in the tank. There is a connection on tank for attaching 2½-in. hose

so that plain water can be forced through the engine and chemical hose for filling tank, or direct through chemical hose without interfering with tank. Automatic reel: For carrying the chemical hose placed back of driver's seat, securely attached.

Fire Engine.—Pump: Placed back of driver's seat is a Robinson fire engine pump with a capacity of 700 gallons per minute, mounted on a steel frame, constructed throughout of solid bronze. The pump is fitted complete with standard fire engine gauges, balanced hose gates, automatic relief valves, etc. Pump drive: Gears forged from best steel direct to driving shaft, working in oil, in oil-tight aluminum gear case. Water supply and suction hose: Provide two lengths of best grade rubber suction hose of the standard lengths, equipped with suitable hydrant swivel with handle. Strainer: A perforated metal strainer suction to be carried on brackets with broad saddles, fitted with leather straps on sides of apparatus. Locker: To be placed below the chemical tank or hose basket, or at the most convenient place for apparatus. Painting: The finest coach finish in any color desired. Lettering in gold leaf.

Tools and Equipment.—200 feet ¾-in. four-ply chemical engine hose fitted with best chemical hose couplings; 2 acid receptacles; 1 acid receptacle holder, to be placed on rear step; 2 Dietz Fire Department lanterns, with holders to be placed on sides of body; 1 locomotive alarm bell; 1 door opener; 1 extra rubber tire and rim; 2 Weed chain tire grips, or their equal, to be placed on rear wheels when necessary; all necessary wrenches, such as monkey wrench, filling cap, hub cap and spanners, to be supplied with apparatus and automobile tools.

Oil Electric Passenger Transportation

If experiments which are under way prove as successful as they promise Standard Oil may find its "Scalp Oil," now an almost worthless article, on the corporation's market, converted into a valuable asset and a prolific source of revenue. The Strang Gas and Electric Company, a New Jersey corporation, has built four cars for railroad work on the gasoline-electric system. A direct driven generator, coupled to a gasoline engine, supplies current to motors, which in turn drive the wheels of the car. Three of these cars are in actual railroad operation. The engineers of the company state that the development of the car has reached a point where the cost of carrying passengers can be reduced to about 55 per cent of that on present steam systems, with a first cost enormously lower than that of the third-rail system. Thomas A. Nevins, banker, of 37 Wall Street, President of the Newark Gas Company, is interested in a process for turning "crude oil," or even "scalp oil," into gas of the nature of producer gas for use in the explosion chambers of gas engines. Previous converters have failed commercially because of the production of tarry residues and soot which blocked the working parts of engines. Mr. Nevins' engineers state that converters of the new type have been successfully used on motor launches and that the old stumbling blocks have been eliminated. Negotiations are pending for a combination of the two systems, the Strang gas-electric engine and the Nevins converter. By such a combination the cost of fuel in the Strang engine is expected to be reduced to about one-twelfth. At the invitation of Mr. Nevins about 25 capitalists and engineers took the journey from Communipaw to Lakewood and back on the Strang car "Irene," during which trip the points of the present car were demonstrated. The addition of a converter to the car is to be commenced at once. Among those who took the trip were Paul Brady and F. H. Shephard, of the Westinghouse Company; David Young, consulting engineer of Brown Brothers, and Mandell Montgomery, a transportation expert of Philadelphia.

THE WEEK'S CONTRACT NEWS

Relating to Municipal and Public Work—Street Improvements—Paving, Road Making, Cleaning and Sprinkling—Sewerage, Water Supply and Public Lighting—Fire Equipment and Supplies—Bridges and Street Railways—Sanitation, Garbage and Waste Disposal—Police, Parks and Miscellaneous—Proposals and Awards

To be of value this matter must be printed in the number immediately following its receipt, which makes it impossible for us to verify it all. Our sources of information are believed to be reliable, but we can not guarantee the correctness of all items. Parties in charge of proposed work are requested to send us information concerning it as early as possible; also corrections of any errors discovered.

BIDS ASKED FOR

STREET IMPROVEMENTS

Idaho.....	Caldwell.....	Oct. 29.....	Paving 30 blocks with bitulithic; cost, \$127,000.....	F. H. Richardson, C.E., care City Clk.
Kentucky.....	Ashland.....	Oct. 30, 7 p.m.....	Brick or bitulithic paving, 34,500 sq. yds.; comb. cement curb and gutter, 21,700 lin. ft.; Contract R.....	E. A. Shepard, City Clerk.
Pennsylvania.....	Hamburg.....	Nov. 1.....	Brick paving, concrete curb and sidewalks, etc.....	Frank I. Tobias, Boro. Secretary.
Florida.....	Bristol.....	Nov. 1, noon.....	Working and keeping in repair 64 miles of road.....	S. I. Revell, Clk. County Comrs.
Indiana.....	Delphi.....	Nov. 1, noon.....	Bldg., complete, gravel road in Jackson twp.....	M. G. Haun, County Auditor.
Indiana.....	Crown Point.....	Nov. 1, noon.....	Bldg. Riley gravel road in North township.....	Charles A. Johnson, County Auditor.
Indiana.....	Kentland.....	Nov. 1, 1 p.m.....	Constructing 2 macadam roads in Grant township.....	E. R. Bringham, County Auditor.
Indiana.....	Marion.....	Nov. 1, 2 p.m.....	Bldg. Monroe Center gravel road, 3 miles long.....	A. G. Stout, County Auditor.
Indiana.....	Williamsport.....	Nov. 1, 1 p.m.....	Constructing gravel road in Mound township.....	Robert L. Winks, County Auditor.
Indiana.....	Brazil.....	Nov. 2, 11:30 a.m.....	Constructing 7,900 ft. gravel road in Dick Johnson township.....	J. L. Burns, County Auditor.
Indiana.....	Paoli.....	Nov. 2, 2 p.m.....	Constructing 2 gravel roads, 18,240 ft. long, in Greenfield twp.....	Alvin B. Ham, County Auditor.
Indiana.....	Fowler.....	Nov. 2, 1 p.m.....	Bldg. Sheetz gravel road, inc. bridging, etc., Pine twp.....	Lemuel Shipman, County Auditor.
Indiana.....	Petersburg.....	Nov. 2, 2 p.m.....	Constructing 6 roads, 11 miles long, in Logan township.....	F. R. Bilderback, County Auditor.
Indiana.....	Rockville.....	Nov. 2, 1:30 p.m.....	Bldg. 2 gravel roads, inc. bridging, etc., in Raccoon township.....	H. A. Henderson, County Auditor.
Oklahoma.....	Stillwater.....	Nov. 2.....	Asphalt paving, 71,000 sq. yds.....	C. A. Wood, City Engineer.
Indiana.....	Logansport.....	Nov. 3, 10 a.m.....	Bldg. 2 gravel roads in three townships.....	Geo. W. Cann, County Auditor.
Ohio.....	Columbus.....	Nov. 3.....	Improving six or more streets.....	E. W. Hirsch, Secy. Bd. Pub. Service.
Indiana.....	Lafayette.....	Nov. 4, 10 a.m.....	Bldg. 2 1-2 miles gravel road in Tippecanoe township.....	John P. Foresman, County Auditor.
Indiana.....	Fowler.....	Nov. 4, 1 p.m.....	Bldg. stone road on County line; cost, \$12,590.....	Lemuel Shipman, County Auditor.
Pennsylvania.....	Saltsburg.....	Nov. 4, noon.....	Grading, curbing, paving, portion of Point st.....	President of Boro Council.
Utah.....	Salt Lake City.....	Nov. 5.....	Grading, curbing, paving 3rd st., Ext. No. 61.....	George O. Chaney, City Engineer.
Indiana.....	Wabash.....	Nov. 6, 6 p.m.....	Improving first alley east of Wabash st.....	Freemont McLees, City Clerk.
Ohio.....	Toledo.....	Nov. 9.....	Paving Knapp st. and Broadway with asphalt, wood block, etc.....	Reynold Volt, Sec'y Bd. Pub. Serv.
Iowa.....	Jefferson.....	Nov. 9, 8 p.m.....	Graveling 8 ft. width, 8-in. thick on Adams street.....	B. S. McCully, City Clerk.
Kansas.....	Olathe.....	Nov. 10.....	Constructing Kansas City and Aubrey wagon roads.....	Jasper T. Kincaid, County Clerk.
Wisconsin.....	Madison.....	Nov. 10, 2 p.m.....	Improving Washington avenue.....	O. S. Norsman, City Clerk.
Ohio.....	Cincinnati.....	Nov. 12.....	Improving Cleves and Miami town roads; Spec. 975.....	Fred Dreihls, Clk. Co. Comrs.
Indiana.....	La Porte.....	Nov. 13, 10 a.m.....	Constructing macadamized road in Michigan township.....	Charles H. Miller, County Auditor.
Indiana.....	Fowler.....	Nov. 14, 1 p.m.....	Bldg. stone road 9 ft. wide, 19,480 ft. long; cost, \$12,590.....	Lemuel Shipman, County Auditor.
Tennessee.....	Bristol.....	Nov. 15, 1 p.m.....	Grading and macadamizing 60 miles of road, inc. masonry, bridging, tiling, etc.....	F. G. Phillips, County Engineer.
Oklahoma.....	Chandler.....	Nov. 16.....	Bldg. hard surface road 30.5 miles long.....	J. E. Ray, Clk. County Comrs.
Wisconsin.....	Two Rivers.....	Nov. 19, 7:30 p.m.....	Bldg. cement pavement, grading, curbing, Washington street.....	O. S. Norsman, City Clerk.

SEWERAGE

Iowa.....	Shenandoah.....	Oct. 29.....	Constructing 8 and 10-in. vit. pipe sewers in 7 streets.....	C. M. Conway, City Clerk.
Ohio.....	Sandusky.....	Oct. 29.....	Bldg. 3,500 ft. 8-in. double strength vit. pipe storm and sanitary sewer.....	A. H. Stutz, Village Clerk.
Ohio.....	Steubenville.....	Oct. 29, noon.....	Sewering, grading, macadamizing Bloomfield & Smithfield pike.....	Board County Commissioners.
Utah.....	Salt Lake City.....	Oct. 29.....	Bldg. pipe sewers in Iowa ave., Sewer Exten. No. 236.....	H. G. McMillin, Chm. Bd. Pub. Wks.
New York.....	Buffalo.....	Oct. 30.....	Removing existing trunk sewer outlet and bldg. new one under Black Rock Harbor and Channel, near Albany st.; \$150,000.....	F. G. Ward, Com'r Public Works.
North Dakota.....	Fargo.....	Nov. 1, 5 p.m.....	Bldg. 1,840 ft. 48 x 72-in., 1,550 ft. 38 x 57-in. and 1,800 ft. 30 x 45-in. brick sewer; 1,350 ft. 24-in., 680 ft. 20-in. vit. pipe; 22 manholes, 16 catch basins, 1 flush tank, concrete outfall.....	N. C. Morgan, City Auditor.
Florida.....	Quincy.....	Nov. 1.....	Bldg. 8-18-in. sewers, water mains, etc.....	Geo. H. Palmer, City Engineer.
Utah.....	Provo.....	Nov. 1, 8 p.m.....	Bldg. vit. sewers in Dist. 11: 20,085 ft. 6-in., 7,558 ft. 8-in., 991 ft. 10-in., 1,445 ft. 12-in., 1,929 ft. 15-in., 4,913 ft. 18-in.; cost, \$48,926.....	E. A. Jacob, City Engineer.
Indiana.....	Kokomo.....	Nov. 1, 10 a.m.....	Constructing various sewers.....	W. T. Meek, City Clerk.
New York.....	Rome.....	Nov. 1, noon.....	Bldg. sewage disposal plant at State Insane Asylum.....	R. C. Briggs, Pres. Bd. Mgrs.
Minnesota.....	Brainerd.....	Nov. 1, 8 p.m.....	Bldg. lateral sewer L, in Sewer District No. 1.....	V. N. Roderick, City Clerk.
West Virginia.....	Huntington.....	Nov. 1, 2 p.m.....	Bldg. 12-in. tile sewer in alley bet. Wash. and Adams aves.....	John Coon, Com'r Sts. & Sewers.
Ohio.....	Cleveland Hts.....	Nov. 2, noon.....	Bldg. sanitary sewers 770 ft. along Warrens C. and V. road.....	Wm. G. Phare, Village Clerk.
Tennessee.....	Chattanooga.....	Nov. 2, 2:30 p.m.....	Bldg. \$100,000 Chattanooga Creek intercepting sewer system, inc. 1,800 ft. 20-in., 1,865 ft. 24-in., 4,680 ft. 36-in., 3 sewer bridges over creek, 7 manholes, max. cut, 32 ft., solid rock excav., 200 cu. yds.....	H. F. Van Dusen, Chm. Bd. Pub. Wks.
Pennsylvania.....	McKeesport.....	Nov. 4.....	Complete design of sewer system and disposal plant.....	C. E. Soles, City Controller.
Utah.....	Salt Lake City.....	Nov. 5.....	Bldg. sewer extensions Nos. 220, 225 and 228.....	H. G. McMillan, Chm. Bd. Pub. Wks.
Wyoming.....	Pt. D. A. Russell.....	Nov. 5.....	Bldg. independent outlet for sewer system, 9,432 ft. 12-in. sewer pipe and 26 manholes.....	Capt. V. K. Hart, Constr. Q. M.
Texas.....	Houston.....	Nov. 8, noon.....	Bldg. sanitary sewers in Fifth Ward: 3,065 ft. 30-in. vit. pipe, 2,859 ft. 24-in., 1,375 ft. 20-in., 11,151 ft. 15-in., 1,552 ft. 12-in., 1,450 ft. 10-in., manholes, Y's, etc.....	Dan C. Smith, City Comptroller.
Rhode Island.....	Providence.....	Nov. 9, 2 p.m.....	Furn. and install., complete, at sewage pumping station, cent. pumps with auxiliaries, inc. condenser and pumps and feed-water pumps, now con. with fly-wheel engines; also 5,620 ft. 30-in. circular brick and concrete sewer.....	Henry Fletcher, Mayor.
Ontario.....	Toronto.....	Nov. 16, noon.....	Furn. 3,000 ft. 60-in. riveted steel pipe, 500 ft. riveted tapered steel pipe, 1,782 ft. 60-in. rein. concrete pipe for outfall sewer.....	Joseph Oliver, Mayor.

WATER SUPPLY

New York.....	New York.....	Oct. 29, 2 p.m.....	Furn. double-nozzle standard N. Y. hydrants, inside screen valves, valve boxes and covers; also furn. and deliver and laying water mains.....	John H. O'Brien, Comr. W.S., G. & E.
Alabama.....	Ft. Morgan.....	Oct. 29, 1:30 p.m.....	Constructing 8 cypress cisterns at fort.....	Capt. H. B. Chamberlain, Constr. Q. M.
Nebraska.....	Nelson.....	Oct. 29, 8 p.m.....	Material and labor for bldg. w. w., inc. trenching and laying 25,000 ft. c. i. pipe, 35 fire hydrants, 20 valves and boxes, 100,000-gal. elevated tank, 50 k.w., a.c. generator, engine, dir. con.; 2 marble switchboards, etc.; steam boiler, etc.; feed water heating centrifugal pump and motor.....	S. A. Lapp, Mayor.
Massachusetts.....	Hingham.....	Oct. 30, 11 a.m.....	Bldg. fresh water system at U. S. Naval Magazine.....	Bur. Yds. & Docks, Navy Dept., Washington, D. C.
New York.....	Buffalo.....	Nov. 1.....	Removal of rock for foundation of new engine No. 2, and for pump well at present pumping station.....	F. G. Ward, Com'r Pub. Wks.
North Carolina.....	Wilmington.....	Nov. 1, noon.....	Reconstructing water works, inc. mfg. and erecting all machinery and a steel water tower, etc.....	Chas. Worth, Chm. Water & S'r Com.
South Dakota.....	Stickney.....	Nov. 1.....	Furn. and laying 800 ft. water main, valves, hydrants, etc.....	Dakota Eng. Co., Mitchell.
North Dakota.....	Ellendale.....	Nov. 1.....	Laying 6-in. water main in Main St.....	V. E. Hastkins, City Auditor.
Florida.....	Quincy.....	Nov. 1.....	Bldg. reservoir, 150 k.w., dir. con. generator, 200 h.p. engine, 4-valve type; 1,500,000 U. S. gal. pump, air compressor, stand pipe, fire hydrants, 4-12-in. c.i. pipe, valves and boxes, power plant bldg.; 8-18-in. sewer pipe, wire, etc.....	Geo. H. Palmer, City Engineer.
Minnesota.....	Cloquet.....	Nov. 1.....	Bldg. water mains and sewers in Main st., Dunlaps Island.....	James Loisel, City Clerk.
North Dakota.....	Fargo.....	Nov. 1, 5 p.m.....	Bldg. 4,040 ft. 12, 10, 8 and 6-in. c. i. pipe in 4 streets.....	N. C. Morgan, City Auditor.

BIDS ASKED FOR

STATE	CITY	RECEIVED UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
WATER SUPPLY—Continued				
Mississippi	Ackerman	Nov. 2	Bldg. 15,000-gal. reservoir, etc., for water works.	X. A. Kramer, C.E., Magnolia.
Mississippi	Benoit	Nov. 2	Drilling artesian well.	M. M. Thompson, Mayor.
New York	New York	Nov. 4, 11 a.m.	Install new Croton pressure system, new salt water line, additions to steam lines in trench, etc., Halls Island.	John J. Barry, Com'r Correction.
Pennsylvania	Philadelphia	Nov. 4	Converting Queen Lane pumping station into a filtration plant, equipment to cost \$65,000, inc. two 2,000,000-gal. pumps, for sand washing, two 5,000,000-gal. centrifugal pumps, for washing filter beds, 2 electric light generators, four 100-h.p. boilers, coal handling plant, traveling crane, etc.; total, \$2,000,000.	Dept. of Public Works. Water and Light Commissioner.
Pennsylvania	Titusville	Nov. 4	Furn. 1,500 ft. 6-in. c. i. pipe; also 3-way fire hydrant, etc.	F. B. Barber, Village Clerk.
Nebraska	Belden	Nov. 4, noon	Bldg. \$8,000 w. w., inc. 4, 6 and 8-in. c. i. pipe, valves, hydrants, etc.; 12 x 60 ft. steel standpipe, frame pump. station, gasoline engine, triplex deep well pump, brick-lined well; Arnold C. Koenig, C.E., Bee Bldg., Omaha.	Geo. W. Armstrong, Secy. Bd. P. W. Bur. Yds. and Docks, Navy Dept. Washington, D. C.
Washington	Spokane	Nov. 5, 2 p.m.	Three 7,500,000-gal. multi-stage centrifugal pumps, 3 induction motors, switchboards and connections.	Bur. Yds. and Docks, Navy Dept. Board of Water Commissioners.
Florida	Key West	Nov. 6, 11 a.m.	Bldg. \$25,000 concrete cistern at Naval Station.	Benj. F. Guiney, Sec'y Water Bd. Constructing Quartermaster.
Dist. of Col'bia	Washington	Nov. 6, 11 a.m.	Additional artesian water supply, Naval Prov. Gr.	J. B. Winslett, City Secretary.
New York	White Plains	Nov. 8	Furn. material and constructing intercepting well.	J. G. Warren, Lt.-Col. U. S. Engrs
Michigan	Detroit	Nov. 9, noon	Bldg. and erecting 3 pumping engines, 30,000,000 gals. each.	C. J. Goodier, Constr. Q. M. City Clerk.
Florida	Ft. Dade	Nov. 9, 8 p.m.	Bldg. 3,500 ft. extension of water main.	
Texas	Dallas	Nov. 10, 3 p.m.	Furn. and install. 15,000,000-gal. pumping engine of vertical triple expansion, cond. crank and fly-wheel self-cont. type.	
Ohio	Cincinnati	Nov. 15, 2 p.m.	Furn. and install. water system at Dam 37, Ohio river.	
New Jersey	Fort Hancock	Nov. 19, noon	Bldg. 300,000-gal. rein. concrete stand pipe, 8-in. well, pump house, boilers, machinery, extending mains, etc.	
Nebraska	Carroll	Jan. 11	Constructing water works; previous bids rejected.	
BRIDGES				
New York	Sullivan	Oct. 30	Furn. material and bldg. through steel riveted truss bridge with concrete and macadam floor system.	Co. Supt. of Hwys., Syracuse.
Indiana	Richmond	Oct. 30, 10 a.m.	Bldg. 3 steel bridges and repairing two bridges.	D. S. Coe, County Auditor.
Indiana	Indianapolis	Oct. 30, 10 a.m.	Bldg. abutments of bridge over Goose Creek, Decatur twp.	Albert Sahn, County Auditor.
Quebec	Sherbrooke	Oct. 30, 1 p.m.	Bldg. steel bridge over Magog river.	F. J. Griffith, City Sec'y-Treas.
Ohio	Bucyrus	Oct. 30, noon	Bldg. stone substructure; also 120 ft. superstructure, with 7 panels, of 16 ft. 10 1-4 in. each, 20-ft. roadway, concrete floor and two 8-ft. walks; live road, 300 lbs. per lin. ft.; also 77.5 ft. and 90-ft. spans of Kleinkecht & Albright bridges.	J. I. Smith, County Auditor.
Virginia	King William	Nov. 1, noon	Plans and proposals for bldg. steel bridge over Harrison Creek; 38 ft. long, 12 ft. inside width, 7 ft. above bed of creek, white oak floor, 2 inches thick.	B. C. Garrett, Clk. Co. Supervisors.
Kansas	Leavenworth	Nov. 1, noon	Bldg. rein. concrete abutment and replacing bridge No. 275; repairing 2 abuts. and bldg. 42-ft. span bridge with concrete floor; bldg. 6 x 8 rein. concrete arched culvert.	J. W. Nicholas, County Clerk.
Indiana	Brazil	Nov. 1, 11:30 a.m.	Constructing a reinforced concrete bridge.	J. L. Burns, County Auditor.
Indiana	Vernon	Nov. 1, 11 a.m.	Bldg. 3-arch stone bridge at Edwards Ford.	T. L. Thomas, County Auditor.
Missouri	Galena	Nov. 1	Bldg. bridge over James river, Sec. 7, Twp. 24, Range 23.	John H. Resser, County Engineer.
Iowa	Burlington	Nov. 1, 4 p.m.	Repairing Cascade bridge for city.	J. F. Winters, City Engineer.
Ohio	Circleville	Nov. 1, noon	Bldg. sub and superstructure of bridge in Salt Creek twp.	N. C. Bohnert, County Auditor.
Georgia	Fairburn	Nov. 1	Bldg. bridge over R. R., 2 concrete piers, three 27-ft. spans, 2 concrete abutments.	L. W. Robert, Court H., Atlanta, Ga.
Mississippi	Magnolia	Nov. 1	Bldg. steel span bridge, also 2 other bridges.	W. C. Vaught, Clk. Co. Supervisors.
Mississippi	Purvis	Nov. 2	Bldg. steel bridge over Black Creek.	D. C. Camp, Pres. Bd. Co. Superv.
Florida	Tampa	Nov. 2	Bldg. steel draw bridge over Hillsboro river.	E. J. DeVane, Chm. Bd. Co. Comrs.
Indiana	Fowler	Nov. 2, 1 p.m.	Bldg. several bridges, culverts, etc., in Pine township.	Lemuel Shipman, County Auditor.
Indiana	Vincennes	Nov. 2, 2 p.m.	Bldg. 50-ft. steel bridge with concrete abutments.	John T. Scott, County Auditor.
Indiana	Decatur	Nov. 2, 10 a.m.	Bldg. Luginbill bridge in Blue Creek township.	H. S. Michaud, County Auditor.
Delaware	Dover	Nov. 2	Erection of Carters bridge.	S. W. Darby, Jr., Clk. of Peace.
Louisiana	Tallulah	Nov. 3	Bldg. bridge over Roundaway Bay, 140 ft. long, 16 ft. wide, with 60-ft. span; approaches to be filled.	A. L. Slack, Sec'y Police Jury.
Pennsylvania	Reading	Nov. 4, 10 a.m.	Bldg. 1-span steel truss bridge over Tulpehocton creek; also concrete abutments and wing walks, inc. 290 cu. yds. concrete above foundation line and 250 cu. yds. below.	A. L. Rhodes, County Auditor.
Indiana	Fowler	Nov. 4, 1 p.m.	Bridging, draining, etc., C. I. Fox stone road; cost, \$12,590.	Lemuel Shipman, County Auditor.
Ohio	Cincinnati	Nov. 5, noon	Laying new floor on bridge at Miamitown.	Fred Dreihls, County Auditor.
Arizona	Phoenix	Nov. 6, 2 p.m.	Bldg. \$100,000 rein. concrete bridge over Salt river at Center st.	Wm. E. Thomas, Clk. Co. Superv.
Ohio	Eaton	Nov. 6, noon	Constructing 4 new bridges.	Board of County Commissioners.
Tennessee	Knoxville	Nov. 8, 10 a.m.	Bldg. rein. girder viaduct at Asylum ave. with approach.	J. W. Plenniken, Chm. Bd. Pub. Wks.
North Dakota	Ellendale	Nov. 8, 2 p.m.	Replanking Oakis bridge with 3-in. fir plank, etc.	V. E. Haskins, County Auditor.
Ohio	St. Clairsville	Nov. 8, 1 p.m.	Repairing Union town bridge in Wheeling township.	Roy H. Cope, County Auditor.
Brit. Columbia	Vancouver	Nov. 12, 4 p.m.	Bldg. bridge over False Creek, bet. Bridge and Beatty sts.; 3,375 ft. long, with 264-ft. elec. op. swing span on concrete piers, 66 deck plate girder spans, 35 to 80 ft. long, on steel bents on concrete pedestals; approaches, 150 ft. long; roadway, 44 ft. wide; cres. wood floor; two 6-ft. walks.	Mayor and City Council. C. J. Allister, County Auditor.
North Dakota	La Moure	Nov. 16, 2 p.m.	Constructing various bridges for County.	
Ohio	Cleveland	Nov. 16	Bldg. substructure of hwy. bridge and approaches over N. V. C. & St. L. Ry. tracks and raising bridge over Walruth Run; 2,400 cu. yds. rein. concrete, 4,000 yds. plain concrete, 601 yds. stone masonry and 14,000 ft. piling.	E. H. McIntosh, Sec'y B. P. S. Town Commissioners.
Illinois	Batavia	Nov. 29	Building steel bridge over Mahanoy Creek.	
LIGHTING AND POWER				
Florida	Quincy	Nov. 1	Improving light and water plant, inc. wire, poles, arms, etc.	Geo. H. Palmer, City Engineer.
Ontario	Bracebridge	Nov. 1, 6 p.m.	(a) Bldg. general works of hydro-electric development of Wilson's Falls, Muskoka river, inc. dams, coffer dams, rock excav., concrete walls, foundations, etc.; (b) hydraulic machinery, inc. 1,100 h.p. turbine, 35 h.p. turbine, governor, penstock, etc.; (c) electrical machinery, inc. generator, exciter, switchboard, etc.; C. H. and P. H. Mitchell, Engrs., Traders Bank Bldg., Toronto.	Alex. Salmon, Town Clerk.
Mississippi	Ackerman	Nov. 2	Bldg. \$35,000 elec. light plant; X. A. Kramer, C.E., Magnolia.	J. M. Harris, City Clerk.
New Jersey	Bridgeton	Nov. 2	Lighting city for 5 years from December, 1909.	Frank L. Hewitt, City Clerk.
California	Chico	Nov. 2	Purchase of franchise for elec. distributing system.	Board of Supervisors.
California	San Bernardino	Nov. 2	Franchise for overhead transmission lines in county.	County Board of Supervisors.
Connecticut	New Haven	Nov. 3, 8 p.m.	Furn. and maintaining for 3 or 5 years 50 open-flame gas lamps, 1,320 incandescent or mantle lamps, and number of naphtha lamps, to burn 4,000 hours per year; also light, clean and extinguish; total cost per lamp per year from Dec. 31, 1909.	J. M. Mulvey, Chm. Lighting Com.
Washington	Spokane	Nov. 5, 2 p.m.	Furn. three 7,500,000-gal. multi-stage, centrifugal pumps, 3 induction motors, switchboard and connections.	Geo. W. Armstrong, Sec'y Bd. P. W.
New Jersey	Orange	Nov. 8, 8 p.m.	Bldg. city light plant; revised plans, etc.; separate bids for generating plant and distributing system; 65 miles of wire, 368 arc and 95 Tungsten lamps; 8 switchboard sections; Runyon & Carey, Engineers, 122 Market st., Newark.	Arthur B. Seymour, Mayor.
Virginia	Richmond	Nov. 8	Condensers, piping, pumps and heaters for city light plant.	E. D. Richardson, Chm. Com. Elec.
Georgia	Savannah	Nov. 8	Illumination by 610 electric arc, also incandescent, lamps, of city streets, and for sale to city of electric current for illumination, heat or power.	Harry Willink, Dir. of Pub. Wks.
Delaware	Ft. Dupont	Nov. 9, 11 a.m.	Bldg. electric lighting system at fort (no machinery).	Constr. Q. M., U. S. A.
Arizona	Whipple Barracks	Nov. 10, 3 p.m.	Bldg. lighting system for Whipple Barracks.	Lt. Wm. A. Alfante, Constr. Q. M.

BIDS ASKED FOR

STATE	CITY	RECEIVED UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
MISCELLANEOUS				
Ohio.....	Cincinnati.....	Oct. 29.....	Furn. underground cable for tel. and signal circuits of Fire Dept.	E. G. Prior, Sec'y Dept. Pub. Safety.
New York.....	Buffalo.....	Nov. 1.....	Bldg. concrete docks, foundation for yacht club house, moving club house to new foundation and constructing swimming basin at foot of Jersey street.	F. G. Ward, Com'r Pub. Wks.
Mississippi.....	Vicksburg.....	Nov. 1, 8 p.m.....	Furn. 2,000 ft. 2 1/2-in. cotton rubber-lined fire hose; also 40-gal. chemical engine and hose wagon.	J. J. Hayes, Mayor.
Pennsylvania.....	New Brighton.....	Nov. 1, 7 p.m.....	Furnishing hook and ladder truck.	F. C. O'Rourke, Sec'y Boro. Council.
Manitoba.....	Winnipeg.....	Nov. 1, 11 a.m.....	Furn. motor hose wagon, to carry 2,000 ft. 2.5-in. cotton rubber-lined fire hose and six men.	M. Peterson, Sec'y Bd. of Control.
New Jersey.....	Summit.....	Nov. 3.....	Remodeling Colonial Hall for City Hall purposes.	City Clerk Rowe.
Massachusetts.....	Boston.....	Nov. 4, noon.....	Furn. 23 tons of steel tie-rods, turnbuckles, clevis nuts, etc., for Sec. 1 of tunnel under Beacon Hill.	Boston Transit Commission.
California.....	Sacramento.....	Nov. 8.....	Improving river front levee to North levee.	M. J. Desmond, City Clerk.

STREET IMPROVEMENTS

Anniston, Ala.—City has decided to treat three miles of streets with asphalt oil.—Henry C. Allen, City Engineer.

Birmingham, Ala.—Cliff rds. and Mazuma ave. will be paved by day labor; cost about \$10,000.

Pratt City, Ala.—Citizens will vote Oct. 29 on \$25,000 bonds for road and street improvements.

Little Rock, Ark.—Izard Street Improvement District Commissioners are considering grading and other street improvements; cost \$2,300.—E. A. Kingsley, Superintendent Public Works.

Napa, Cal.—Council has decided to macadamize Third st.

Oakland, Cal.—Superintendent of Streets Walter C. Howe has recommended paving business streets with standard asphalt.

Sacramento, Cal.—City Board of Trustees is considering improvement of G st., from 20th to 31st, with a 32-ft. instead of a 48-ft. roadway; macadam base and concrete surface will probably be used.

San Francisco, Cal.—Board of Supervisors has ordered paving of San Bruno ave. with basalt block and authorized \$34,000 expenditure for same.

San Jose, Cal.—Council is considering improvement of Vine st.; also stone curbs and crossings on East Santa Clara st.

Colorado Springs, Col.—Denver-Colorado Springs road will be improved at cost of \$11,500.

Colorado Springs, Col.—Business men are considering proposed paving of principal business streets.

Bridgeport, Conn.—Council will consider widening of Congress st. between Main st. and Housatonic ave.

Dover, Del.—Finance Committee has sold \$75,000 street improvement bonds to N. W. Halsey & Co., New York, at 101.158 and accrued interest.

Washington, D. C.—District of Columbia Good Roads Association has been organized to construct road from Washington to Leesburg, Va.; cost about \$25,000.—Clarence Moore, President.

Fernandina, Fla.—Council has appropriated \$7,000 for paving Main st.

Miami, Fla.—Citizens will vote Nov. 23 on \$150,000 bonds; \$75,000 will be used for good roads.

Quincy, Fla.—Construction of 50 miles of sand and clay roads is being considered; cost \$15,000.—J. W. Harrell, County Engineer.

Lewiston, Ida.—New paving district, comprising approximately 18,000 yds., will be organized.

Pekin, Ill.—Council is considering paving of Broadway, Susannah, 5th and 6th sts.; cost \$18,703.70.

Springfield, Ill.—Contract will be let about Nov. 1 for paving New st. with brick, asphalt fill, and cement curb and gutter.

Fort Wayne, Ind.—Board of Public Works has confirmed resolutions for paving two alleys and graveling Wildwood ave.

Indianapolis, Ind.—Gladstone ave. residents are urging construction of permanent pavement.

Indianapolis, Ind.—Board of Public Works has adopted five street improvement resolutions and ordered plans for improvement of 23d st. and Kentucky ave.

Michigan City, Ind.—County Commissioners have ordered Joseph Davis rd. in Hanna Township built.

Vincennes, Ind.—Board of Works is considering opening and extension of Oaks and Locust sts.

Keokuk, Ia.—Council has passed resolution ordering laying of cement sidewalks in a number of streets in city.

Hutchinson, Kan.—City Engineer G. L. McLean has recommended to City Commissioners that city purchase equipment for testing brick and cement, and that this inspection be done by City Engineer.

Kansas City, Kan.—Bids will be received by Board of Commissioners of Wyandotte

County for three miles of rock road; bids are being received for grading and macadamizing Sherman rd.; cost \$12,000.—J. M. Lindsey, County Engineer.

Wichita, Kan.—City is considering construction of 1 1/4 miles of brick paving on W. Douglas ave. and 1/2 mile on Fremont st.—Bert C. Wells, City Engineer.

Bellevue, Ky.—Citizens will vote Nov. 2 on \$45,000 bonds for road and street improvements.

Lexington, Ky.—Council has passed ordinances for improvement of Church, South Limestone and West 4th sts.

Crowley, La.—Police Jury has adopted resolution offered by W. F. Brooks appropriating \$3,000 for construction of turnpike from Mermentau River across parish.

Natchitoches, La.—The Mayor has been authorized to secure from State authorities competent Civil Engineer to establish proper grade for streets; this is found necessary before street improvements as arranged under Governor Sanders' plan can be made.

New Orleans, La.—City is considering opening of Canal st. across City Park ave.

Forest Hill, Md.—Providing community contributes \$500, Harford County Commissioners will appropriate \$1,000 to extend Forest Hill-Rock rd. a mile.

Takoma Park, Md.—Takoma Park Citizens Association is considering elimination of grade crossing at Cedar st.

Marblehead, Mass.—Citizens will vote Oct. 29 on appropriation for highways as requested by Surveyor.

New Bedford, Mass.—Board of Aldermen is considering extension of North Front st.

Bay City, Mich.—County Road Commissioner will view portion of road in Bay County yet to be improved.

St. Joseph, Mich.—Council has rejected all bids for construction of alley, between State, Main, Elm and Market sts.; work will be done by city.

Albert Lea, Minn.—Council has ordered construction of number of new sidewalks.

Alexandria, Minn.—County Board has approved petition for new roads for Crooked Lake.

Biwabik, Minn.—Township Supervisors have decided to rebuild sidewalk from village limits to top of Merritt Hill.

Princeton, Minn.—Board of Commissioners of Millelacs County received no bids for construction of a portion of State rd. No. 1.—Ole H. Uglem, Chairman.

St. Paul, Minn.—Good Roads Committee of Council has apportioned \$25,000 fund among various roads leading out of the city; Assemblymen Whitcomb and Daily secured \$1,000 of fund for graveling Central ave. from Rice to Dale; distance, one mile.

Virginia, Minn.—Bid of \$300 and taking city's old road scraper for much larger scraper offered by the Austin-Western Company of St. Paul has been rejected by Council.

Springfield, Mo.—Council has passed ordinances for construction of cement sidewalks on Lexington ave.

Butte, Mont.—Council has adopted resolutions providing for grading of West Woolman st. and for regrading of an alley rear of West Park st.

Omaha, Neb.—County Commissioners have ordered bids advertised for grading 56th st.

Gloucester City, N. J.—Residents and property owners along King st. will petition Council to use wood block in paving of that street.

Long Branch, N. J.—Council has returned unopened one bid received for repairing asphalt streets; work will be done by city.—Ellsworth Jackson, Chairman Street Committee.

Milburn, N. J.—Township Committee passed on first reading ordinance for opening road between Short Hills station of Lackawanna Railroad and Millburn ave.

Newark, N. J.—Taxpayers have peti-

tioned Board of Works to pave Clifton ave. from Ellwood to Grafton ave.

Trenton, N. J.—Councilman William W. Large, of the First Ward, will introduce resolution providing that City Engineer Abram Swan, Jr., be directed to draw plans for and prepare estimate of cost of widening Jackson st. from East Front st. to Assanpink Creek.

Brooklyn, N. Y.—Bids will be received by Park Board Oct. 28, 3 p. m., for grading and paving roadway of Parkside ave.—Henry Smith, President.

Corning, N. Y.—State has decided to macadamize highway from Corning city line on West Putney st. through Centerville and Painted Post westward about three miles toward Addison.—C. E. Bower, Superintendent County Highways.

Cornwall, N. Y.—Town will vote Nov. 2 on \$2,300 bonds for construction of highway.—H. D. Lewis, Town Clerk.

Cortland, N. Y.—Board of Public Works has passed preliminary resolution calling for paving of Clinton ave. from the river bridge north to the city line; cement curbs and gutters and macadam, or slag, are materials.

Little Falls, N. Y.—City has decided to pave North Ann st.

New York, N. Y.—Bids will be received Oct. 28 for paving six streets with 21,355 sq. yds. asphalt block; also asphalt blocks, 9,675 sq. yds., and 1,060 sq. yds. new granite block pavement; repaving 5,270 sq. yds. granite blocks, or 5,350 sq. yds. completed asphalt block pavement; paving bridge over the N. Y. N. H. & H. R. R. at E. 156th st., 1,710 sq. yds. asphalt; regulating, grading, curbing and flagging sidewalks, requiring 163,620 sq. ft. new flagging, finished and laid; 44,635 lin. ft. new curb, furnished and set, etc., on 11 streets.—J. F. Murray, President, Bronx Borough.

Lexington, N. C.—Lexington Township has voted \$100,000 bonds for road and street improvements.

Newbern, N. C.—Citizens have voted \$50,000 bonds for paved streets.

Salisbury, N. C.—Rowan County is considering construction of eight miles of macadamized roads during coming year; estimated cost \$25,000.—C. M. Miller, County Engineer.

Spring Hope, N. C.—Nashville Township has voted bonds for road improvements.

Akron, O.—Council has passed bond ordinance of \$1,275 for paving Bachtel ave., Oak court.

Alliance, O.—People are considering improvement of State road which connects this place with Salem.

Canton, O.—Board of Commissioners of Stark County are preparing preliminary plans for one mile of vit. brick paving, with sandstone curb, on Wooster st. rd.—F. B. Gilchrist, Engineer.

Cincinnati, O.—Council is considering improvement of Charlotte and Ohio aves.

Columbus, O.—Council has passed ordinance to open Naghten st.

Columbus, O.—Council has passed an ordinance to pave 20 streets; city's share of cost, \$40,000.

Dayton, O.—Bids will be received Nov. 15, noon, for \$4,000 bonds for improving South Wayne ave.—Edw. Phillips, City Auditor.

Eaton, O.—Council has decided to pave E. Main st.; also to receive bids for construction of sidewalks on portions of Maple and Israel sts.

Elyria, O.—Residents of Furnace and West River sts. have petitioned Council for paving of these thoroughfares.

Lakewood, O.—City has sold \$17,970 street bonds to Hayden, Miller & Co. at \$668 premium.

Mansfield, O.—Council has decided to improve East 3d st.—W. S. Bradford, Clerk.

Marion, O.—Bids will be received Nov. 1 for purchase of \$2,900 of Guthery free turnpike road bonds.—E. S. Ault, Marion County Surveyor.

Marysville, O.—County Commissioners

have awarded \$40,000 gravel and stone road bonds to First National Bank of Cleveland at \$1,343 premium.

Miamisburg, O.—Committee on Streets will make surveys for grading on Syracuse st.

Mt. Gilead, O.—Seasongood & Mayer, Cincinnati, have secured \$15,000 North Bloomfield road bonds at \$157 premium.

St. Clairsville, O.—Paving bonds to amount of \$18,361.43 have been sold to A. L. Bumgardner, city; Mrs. Sue Davis, city; A. E. Nichol, city, and First National Bank of Cleveland.

Steubenville, O.—County Commissioners are asking for proposals for experimental brick paved road with concrete curbing on road below Brilliant.

Toledo, O.—Council has decided to improve Michigan and White sts.—J. M. Babcock, Clerk.

Youngstown, O.—Council has decided to issue \$14,000 bonds for extension of Burke st.

Copan, Okla.—Copan Township of Washington County has decided to expend \$17,000 on improvements to roads.

Madill, Okla.—Citizens have voted \$2,500 for street crossings.

Marshfield, Ore.—Good Roads Committee is considering building of automobile road from Coos Bay to Roseburg.

Berkley, Pa.—Council has ordered opening of Regent st.

Chester, Pa.—Highway Committee is receiving bids for improvement of Garfield ave., Norwood Borough.

Edwardsville, Pa.—Council has decided to pave Main st. with vit. paving block.—T. J. Hatten, Chief Burgess.

Hanover, Pa.—Town will pave Baltimore st. this fall.

Harrisburg, Pa.—City is considering paving of Evergreen, Second, Disbrow and State sts.

Hazleton, Pa.—Highway Committee has recommended purchase of road roller and sprinkler; cost of latter, \$425.

Jonestown, Pa.—Borough Council has ordered macadamizing of all streets under direction of Geo. H. Miller.

Lebanon, Pa.—Mayor G. B. Marquart will ask for improvement of city's thoroughfares.

Philadelphia, Pa.—Council has passed ordinance for repaving Juniper st. with wood blocks.

Philadelphia, Pa.—Business men are urging improvement of Walnut st.—Jas. Kater is interested.

Reading, Pa.—Berks County Commissioners have petitioned State Highway Commissioner Hunter for 16-ft. wide State road from Hamburg to Upper Bern; distance 23,977 ft.

St. Clair, Pa.—Council has authorized grading and paving Williams st.

Scranton, Pa.—Treasurers' Committee of Lower Branch of Council has decided that a favorable report should be made upon proposed \$50,000 bond issue for paving inter-sections.

Wilkes-Barre, Pa.—Plans are under consideration by Board of Engineers to eliminate every grade crossing in city, sixteen in number; if the plan is carried out, it would involve a cost of six million dollars, four million and a half for the railways having terminals in the city and one million and a half to the taxpayers; proposition will be submitted to referendum of people in February.

Winnsboro, S. C.—City has decided to grade and improve Main st.

Bristol, Tenn.—Lee st. will be repaved from State to Water sts.

Bristol, Tenn.—Board of Mayor and Aldermen of Bristol will probably take contract for grading and macadamizing its streets; contract will be let by Sullivan County Road Commission, and \$25,000 will be spent at once in the improvement of streets by the county, while the city is spending \$10,000 annually in street improvement independent of what the county is spending inside corporate limits.

Batesville, Tex.—Attorney-General's Department has approved \$300,000 Zavalla County road and bridge bonds.

Dallas, Tex.—Paving of Wendelken st. with Jacksboro rock is being considered.

Houston, Tex.—Attorney-General's Department has approved \$300,000 Harris County road and bridge bonds.

Lynchburg, Va.—Campbell County Good Roads Association has taken initial steps for issuance of \$200,000 bonds for good roads.

Norfolk, Va.—Board of Supervisors is considering building of road from Keyroad to Glasgow st.

Portsmouth, Va.—Sixth Ward Local Improvement Board has asked for authority to spend \$1,897.40 on street improvements.—W. E. Henry, President.

Richmond, Va.—Henrico County is considering improvement of 12 miles of roads; cost \$12,000.—Samuel P. Waddill, County Clerk.

Puyallup, Wash.—Council has ordered plans for improvement of Tacoma st.

Spokane, Wash.—No contract was let for macadamizing State and roads Nos. 49 and 50, Spokane County.—H. L. Bowly, Olympia, Secretary State Highway Board.

Tacoma, Wash.—Council is considering ordinance providing for opening of South 8th, 10th, 12th and 14th sts.; cost \$3,000,000.—F. L. Davis, City Engineer.

Tacoma, Wash.—Council has ordered improvement of Court D; alley between Yakima ave. and I st. and South 43d st.; also plans for cement concrete sidewalks on South 31st st.

Moundsville, W. Va.—Engineer Clem C. Smith, Wheeling, is making survey for widening county road from this city as far north as Glendale.

Appleton, Wis.—Board of Public Works has rejected all bids for paving with concrete and otherwise improving portions of Market st.; work will be done by city.—E. L. Williams, City Clerk.

Kaukauna, Wis.—City has rejected all bids for grading 4th st., between Reaume and Hendricks ave.; work will be done by city.

Madison, Wis.—Council is considering construction of sidewalks on four streets.—O. S. Norsman, City Clerk.

Manitowoc, Wis.—City will pave Washington st. up to 13th st.

Menasha, Wis.—City is considering paving of number of streets early in spring with concrete.

Oshkosh, Wis.—City will pave Washington st., east of Broad st.

Racine, Wis.—Council is considering paving of portions of 8th st. and Park ave.—P. H. Connolly, City Engineer.

New Westminster, B. C., Can.—City will pave Front st. next year and will also lay cement walks.

Vancouver, B. C., Can.—Richmond ratepayers have voted to expend \$75,000 in improvement of roads.

Ciudad Juarez, Mex.—President Diaz has announced that he would pave all streets.

BIDS RECEIVED AND CONTRACTS AWARDED

Los Angeles, Cal.—Board of Supervisors has awarded contract to improve a portion of Washington st., Vermont ave. and Sunset blvd. to Rife & Cave, at \$45,730.

Oakland, Cal.—P. H. Hoare has secured contract to improve portion of Bray ave. at \$7,391.

Oakland, Cal.—The Golden Gate Construction Co. has been awarded contract for constructing cement sidewalk on Broadway at 17c. per lin. ft.—Frank R. Thompson, City Clerk.

Sacramento, Cal.—Board of Supervisors Oct. 6 awarded contract to pave 20 miles of the Lower Sacramento rd. with asphalt macadam to the City Improvement Co., of San Francisco, at \$164,637. Other bids received were: Hanrahan & Dowling, San Francisco, \$170,884; Clark & Henery Construction Co., \$182,622; Ransome, Crummeys Co., San Francisco, \$171,352; Worswick Street Paving Co., Fresno, \$183,219; Barber Asphalt Co., San Francisco, \$177,749. F. E. McIntire secured contract to improve section of Farrington rd. with concrete at \$5,725.

San Bernardino, Cal.—Council has awarded contracts for paving of over two miles and a half of city streets. The E. R. Werdin Co. secured the contract for asphaltizing E st. from 4th to 9th, and on 4th from E to F. B. F. Ford got contract for macadamizing D st. from 5th to Base Line, 4th st. from F to I sts. went to the Johnson & Shea Co. for \$14,110.24; 3d st. from the Santa Fe depot to Mt. Vernon ave. will be macadamized by the Highway Construction Co. under private contract for \$2,244; the same company, under private contract, was awarded the paving of 5th st. from Arrowhead ave. to E st. Half the bids were under the estimate of the City Engineer for the work, and were as follows:

E st., asphalt: E. R. Werdin Co., \$25,949.02; Barber Asphalt Co., \$28,560.16; Fairchild-Gilmore-Wilton, \$30,806.09; Engineer's estimate, \$28,809.

D st., macadam: B. F. Ford Co., \$27,455.10; Johnson-Shea Co., \$27,627.39; Highway Construction Co., \$28,294.02; Engineer's estimate, \$24,673.

Fourth st., F to I, macadam: Johnson-Shea Co., \$14,110.24; B. F. Ford, \$14,434.88; Highway Construction Co., \$14,378.01; Engineer's estimate, \$11,790.

Third st., Santa Fe to Mt. Vernon, macadam, private contract: Highway Construction Co., \$2,240; Star Cement Co., \$3,358.70; B. F. Ford Co., \$3,405; Johnson-Shea Co., \$9,069.50; Engineer's estimate, \$9,204.25.

Fifth st., C to E, macadam: Highway Construction Co., \$5,910.95; B. F. Ford Co., \$6,104.83; Johnson-Shea Co., \$6,125.46; Engineer's estimate, \$4,318.

Fourth st., E to F, asphalt: E. R. Werdin Co., \$3,327.36; Fairchild-Gilmore-Wilton, \$3,424.88; Barber Asphalt Co., \$4,334.82; Engineer's estimate, \$4,534.

James McNair secured the contract for grading Rialto ave. from Mt. Vernon ave. to the city limits at 22½c. per yd. Charles McElvaine got the contract for laying the sewer on E st. from Base Line to 16th st. and on Base Line from E to F st. for \$1,929.10; three bids were thrown out.

Hartford, Conn.—Highway Commissioner James H. Macdonald has awarded contracts for construction of new roads in towns of Avon, Bolton, Franklin, Portland, and Pomfret as follows: Lane Construction Co., of Meriden, for 2,850 lin. ft. macadam in Avon, at \$2.35 a lin. ft.; W. M. Bolt, of Hartford, and J. W. Phelps, of Bolton, for 4,020 lin. ft. of gravel road in Bolton, at \$1.39; William B. Wilcox, of Norwich, \$3,860 lin. ft. of gravel road in Franklin, at \$1.43; Amos D. Bridges Sons, Inc., of Hazardville, 2,435 lin. ft. 18-ft. macadam road in Pomfret, at \$2.56, and 1,965 lin. ft. of 16-ft. macadam road, at \$2.26; A. Vito, of Thompson, for 92 lin. ft. of grading on the Hartford-Providence turnpike, at \$1.55; Roger Kennedy, of Middletown, for 1,210 lin. ft. of grading in the town of Portland, at \$1.974, and also for 2,650 lin. ft. of macadam, at \$2.20.

Washington, D. C.—Bids for laying a bituminous macadam pavement on 13th st., N. W., between Euclid st. and Park rd. were opened in the District building by Chief Clerk Garges of the Engineering Department as follows: Cranford Paving Co., 79½c. per sq. yd.; Atlantic Bitulithic Co., \$1.28, and the Commonwealth Construction Co., 96c.

Atlanta, Ga.—Street Committee has accepted bid of Thornton & Mayson for paving Marietta st. from Peachtree to Spring with wood block; the bid was \$2.44 9-10 per sq. yd.

Elberton, Ga.—City has awarded contract to W. M. Bowe, Augusta, Ga., for paving certain sidewalks; cost \$5,000.

Canton, Ill.—Board Local Improvement has awarded contract to pave Martin ave. and W. Maple st. to M. Heckard & Sons, at \$12,386.

Melrose Park, Ill.—Smith & Brown have secured contract for paving Lake st. with metropolitan brick at \$56,448.

Peoria, Ill.—Contract for improvement of Peoria Heights rd. has been let to William Swords, Jr., for exact cost of the work plus \$800 additional, which goes to Swords.

Martinsville, Ind.—Contract to construct highway in Morgan County has been awarded to Wm. A. Irwin, of Frankfort, at \$8,532.

Mishawaka, Ind.—Proposition of H. W. Marshall, Western Construction Company, to repair 2d st. for \$1.25 a sq. yd. has been accepted.

Mt. Vernon, Ind.—A. E. & W. Construction Co., Evansville, has secured contract to construct roads in Posey County at \$46,119.

Newport, Ind.—Contract to construct 3 gravel roads in Vermillion County has been awarded to Thos. Glynn, of Terre Haute, at \$7,100; other bids received were: Geo. W. Sykes, city, at \$7,600, and Chas. Sykes, city, at \$6,700.

South Bend, Ind.—The contracts for the paving of Howard ave. was awarded by the Board of Public Works to C. H. Defrees, Gary stone and pioneer asphalt to be used; the portion from Michigan to Laporte ave., to be built of Barr clay brick, was let to Harry N. Barnes. Contract for the building of walks on Michigan st. was let to M. Feaser, and the walks for Napier st. will be built by H. N. Barnes. The grade, curb and walk contract for 5th st. was also let to Mr. Barnes. Henry DeVos was given the contract for the construction of the sewer on College st.

Sullivan, Ind.—John L. Gittinger, city, has secured contract to construct a stone road in Sullivan County at \$4,995.

Williamsport, Ind.—Contract to construct a gravel road in Warren County has been awarded to Clint Tyler, of Marshfield, at \$8,460.

Waterloo, Ia.—Bryant-Ford-McLaughlin Co., city, has secured contract to pave portions of Sumner, Beach and W. 4th sts. at \$1.90 per sq. yd. on 5-in. concrete base and \$1.84 on 4-in. base.

Homer, La.—City has awarded contract for paving several miles of sidewalks with concrete.

Jennings, La.—Town Council opened bids for the construction of some seven or eight miles of concrete sidewalks, and DeJessey & Barard, of Minden, were declared the lowest bidders.

Baltimore, Md.—Board of Awards has awarded contract at \$2.12 per sq. yd. for vit. brick paving on Port st. to Patrick F. Reddington, 321 St. Paul st.

Denton, Md.—Contract for macadamizing 1.10 miles road, including a pivot draw-bridge and a 70-ft. steel span bridge, with necessary piers, etc., bids opened Oct. 14,

has been awarded to Fisher & Corozza, of Baltimore, for \$31,278, subject to the approval of the Maryland Geological Survey.—I. L. Dukes, Clerk County Commissioners.

Boston, Mass.—Bids were opened for paving and regulating Washington st. from the Arborway to the New Haven Railroad tracks, and James Doherty was low bidder, at \$34,322.80; the other bidders were the F. H. Cowin Co., \$35,342.50, and Jones & Meehan, \$39,871.

Worcester, Mass.—Because of the inability of the Street Department to finish all the work ordered for this year by Council, Mayor James Logan has made a contract with the Hassam Paving Co. to lay about 6,000 sq. yds. of block paving with cement-grouted joints on a trap rock and cement foundation on Southbridge st., at the rate of \$2.90 per sq. yd.; the cost will be close to \$18,000; curbs are to be set on the street which will bring the total cost of the work to about \$19,000; paving will extend from Cambridge st. to Stearns sq.—George C. Moss, Street Commissioner.

Camden, N. J.—The contract for paving Lawrence st. from 7th to 8th st. was awarded to the Barber Asphalt Co. for \$1.69 per sq. yd.

Hackensack, N. J.—The George M. Brewster Construction Company, incorporated some time ago by Sheriff George M. Brewster, John W. Brewster, a brother, and Under-Sheriff Walter Scott, was awarded a contract by County Engineer Ralph D. Earle for the improvement of four roads, to cost \$37,921.32.

Following are the bids as submitted to Mr. Earle:

Main st. and Hudson terrace, in the borough of Fort Lee, Brewster Construction Co., asphalt binder, \$7,884.80; Edward P. O'Neill, asphalt binder, \$8,316; Ernest Abrahams, asphalt binder, \$8,870.40; Edward P. O'Neill, amiesite, \$12,320.

Hudson terrace, Englewood Cliffs, Brewster Co., asphalt binder, \$8,396.80; Edward P. O'Neill, asphalt binder, \$8,856; Ernest Abrahams, asphalt binder, \$9,446.40; Edward P. O'Neill, amiesite, \$13,120.

Paramus road, Midland Township, Brewster Co., asphalt binder, \$11,271.68; Edward P. O'Neill, asphalt binder, \$11,888.10; Ernest Abrahams, asphalt binder, \$12,680.64; Brewster Co., amiesite, \$16,907.52; Edward P. O'Neill, same, \$17,612; Ernest Abrahams, same, \$18,316.48.

Terrace ave., Hasbrouck Heights, Brewster Co., asphalt binder, \$3,155.20; Edward P. O'Neill, asphalt binder, \$3,327.75; Ernest Abrahams, asphalt binder, \$3,549.60; Brewster Co., amiesite, \$4,732.80; Edward P. O'Neill, amiesite, \$4,732.80; Ernest Abrahams, amiesite, \$5,127.20.

The thoroughfares in Fort Lee and Englewood are to be macadam, with asphalt binder, and Terrace ave., Hasbrouck Heights and the Paramus roads of amiesite.

Jersey City, N. J.—Street and Water Board has awarded to Henry Byrne contract for improving Tonnele ave. Philip Tumulty has been given contract for a new sewer in 8th st.; cost is to be defrayed out of excise fund, but Board of Finance has not yet appropriated the money.

Palisades Park, N. J.—All bids for the crushed stone to be used on Broad ave. were rejected and new bids will be advertised for; the bidders were: N. Marleto, of Cliffside, \$1.90 per cu. yd.; Nicola Scioli, of Cliffside, \$1.90 per cu. yd.; L. C. Best, of Palisades Park, \$1.75; Thomas Brannigan, of Fort Lee, \$1.70.

Edward English, of Ridgefield, was the successful bidder for the macadamizing of Central boulevard from 3d to 7th sts.

New York, N. Y.—Contracts have been awarded for paving as follows: To the Barber Asphalt Paving Co., 30 Church st., bids opened Sept. 23, for regulating and repaving with asphalt block on concrete foundation Madison ave., from 94th to 116th st., at \$86,389; 98th st., from Amsterdam ave. to Broadway, at \$4,079; 118th st., from Park ave. to 5th ave., at \$9,346. To the Harlem Contracting Co., 201st st. and Harlem River, bids opened Sept. 23, regulating and repaving with asphalt block on concrete foundation, 2d ave., from 37th st. to 45th st., and from 53d st. to 58th st., at \$61,732. To the Barber Asphalt Paving Co., for repaving and maintaining sheet asphalt pavements in the Borough of Manhattan where guarantee period has expired, bids opened Oct. 5, at \$54,700. To the Sicilian Asphalt Paving Co., 41 Park Row, bids opened Oct. 5, for regulating and repaving with asphalt on concrete, 15th st., from 5th to 6th aves., at \$8,765; 16th st., from 5th to 6th aves., at \$8,724; 33d st., from Madison ave. to Broadway, at \$12,326; 47th st., from 5th to 6th aves., at \$8,792.—J. F. Ahearn, Borough President.

Niagara Falls, N. Y.—The Board of Public Works has awarded Joe D'Anna the contract to build cement sidewalk in Linwood ave. for \$1,175.

Rochester, N. Y.—The Board of Contract

and Supply awarded the contract for paving Schlitzer st. with asphalt to Whitmore, Rauber & Vicinus, at \$1,888.50, and a small section of Mt. Hope ave. paving to F. C. Lauer & Sons Co., for \$915.

Cincinnati, O.—Following are bids received by Board Public Service Oct. 5 for paving with wood block on Eastern ave.: Engineer's estimate, \$90,832. Prices given are per sq. yd.: Alfred Scully, \$1.90; Wm. Scully, \$1.69; Kirchner Construction Co., \$2.60; Russell & Jennison, \$2.62; A. J. Henkel & Bro., \$2.65; M. Sullivan & Sons, \$2.25; J. B. Washburn, \$2 and \$2.15; J. M. Quill, \$2.40 and \$1.76, and the U. S. Wood Preserving Co., \$1.82.

Dayton, O.—Six bids were submitted to the Board of Public Service for grading, paving, making of cement sidewalks and combined curbs and gutters on South Wayne ave. and the bid of David Beard is probably the lowest at over \$30,000; other bidders on the job were all from Dayton and are: W. J. Kernan, J. O. Shoup Co., J. C. Conley Co., Peters Paving Co. and William H. Boyd.

Maumee, O.—Representatives of the Riggs & Sherman Co., of Toledo, opened bids for the construction of two blocks of brick pavement, and Joseph McMahon, a Toledo contractor, was the lowest bidder. The pavement is to be laid this fall.

Springfield, O.—W. F. Payne, city, has secured the contract to pave with Bolan block on a portion of Monroe st., at \$2,272.

Toledo, O.—Service Board has awarded Garrigan Bros. contract for paving Bassett st., Summit to Ontario, for \$5,194.90, and Watters & Tansey secured contract for paving a portion of New York ave. for \$10,393.

Youngstown, O.—Gartland Bros. have submitted lowest bid for paving with brick on Truesdale ave. at \$13,107.

Anadarko, Okla.—City has awarded contract to Southwestern Paving Co., Oklahoma City, Okla., for superintending paving.

Harrisburg, Pa.—Contracts have been let by the State Highway Department for two more sections of the rebuilding program on the National pike in Washington county, about two miles each, to John F. Howley & Co., of Pittsburgh, and Joseph Neipoltano, of Johnstown.

Knoxville, Tenn.—Bids were opened for laying the sidewalk in front of the Highland ave. school and were as follows: Gore & Smith, per sq. yd., 78½c.; Concrete Paving & Curb Co., 79c.; Kries & Henderson, 85c.; Knoxville Roof & Paving Co., 90c. Gore & Smith being low, were awarded the contract.

Bellingham, Wash.—J. M. Ager has submitted only bid for improving a portion of Nequalicum ave. at \$4,603.

Seattle, Wash.—Peabody Bros. have secured contract for concrete sidewalks on W. 57th st. for \$13,424.

Tacoma, Wash.—Commissioner of Public Works H. J. McGregor has awarded the contract for the grading of North Tacoma ave. from 6th to Carr st., North 8th, 9th, 11th and Starr sts. from G st. to Tacoma ave., involving the removal of the bridge on Tacoma, curving the street to the west half a block, to W. A. Jones, for \$27,777; other bids were received as follows: C. W. Maxham, \$32,000; P. E. McHugh, \$32,000; Wells Construction Co., \$29,428.

Beckley, W. Va.—Contract for constructing 3½ miles limestone macadam pavement, 3½ miles concrete macadam and 10,000 ft. 10 to 12-in. sewers, bids opened Sept. 16, has been awarded to Wingate & McGhee, of Roanoke, Va.

Martinsville, W. Va.—Township Trustees have awarded contract to pave River rd. in Putney Township to Dixon & Pickett, at \$2,304.

Wheeling, W. Va.—Road and Bridge Committee of the Board of County Commissioners has awarded contracts for furnishing and breaking stone on National road as follows: G. S. Marple, seventh mile, \$1.30 per yd.; Charles Ridgeley, ninth mile, \$1.19 per yd., and tenth mile at \$1.14 per yd.; Charles Wallace, eleventh and twelfth miles, \$1.14 per yd.

SEWERAGE

Globe, Ariz.—City is considering installation of sewerage system.

Colusa, Cal.—City has sold \$50,000 sewer bonds to Colusa County Bank.

East San Jose, Cal.—Citizens have voted \$60,000 sewer bonds; work on construction will be begun by Jan. 1.

Napa, Cal.—Council has adopted specifications for sewerage East First st.

Sacramento, Cal.—Dr. J. H. Parkinson, President of Board of Health, is urging that preliminary steps be taken towards securing new system of sewerage for city.

San Francisco, Cal.—Board of Supervisors has ordered construction of Sections H and J of North Point main sewer at cost of \$130,000.

Colorado Springs, Col.—City will soon construct 2,000 ft. of sewer in the west part of the city.

Telluride, Col.—City Engineer James has completed plans for a sewer system for western part of city.

Washington, D. C.—Brightwood Park Citizens Association is urging better sewer facilities for that portion of Brightwood east of Georgia ave.

Greenville, Ga.—Citizens have decided to issue bonds for installation of sewer system.

Moscow, Ida.—Council is considering establishment of sewer district in McGregor's addition.

Joliet, Ill.—Residents of Buell ave. have petitioned for construction of sewer on street before construction of pavement.

Springfield, Ill.—Contract will be let about Nov. 1 for sewer in New st.; about 1,600 lin. ft. 18-in. pipe will be needed.

Auburn, Ind.—City is planning to install sewerage system; specifications are being prepared; bids will be called in fall; cost \$75,000.

Evansville, Ind.—Board of Works has ordered sewer constructed along McCormick ave. to Chandler st.

Hammond, Ind.—Board of Public Works has accepted plans for the Lewis st. sewer.

Hammond, Ind.—Board of Public Works has accepted plans and specifications for sewer improvement in Hyslop pl.—A. R. Ebert, President.

Indianapolis, Ind.—Board of Public Works has ordered plans for construction of the Parkway sewer; estimated cost, \$40,000.—J. T. Elliott, Chairman.

Muncie, Ind.—Board of Public Works has ordered plans for construction of sewer in three streets.—J. A. Jackson, City Clerk.

Hamburg, Ia.—Plans have been prepared by Engineers J. T. Worley & Co., Reliance Bldg., Kansas City, Mo., for vit. pipe sewer system; cost \$30,000.

Ablene, Kan.—Council is considering petitions for sewer on North Kunej st. and North Olive st.

Lawrence, Kan.—Plans are being prepared by Engineer H. S. Bedell, Shukert Bldg., Kansas City, Mo., for private vit. pipe sewer system for C. B. Hosford, consisting of 4,000 ft. of 12-in. pipe and 4,500 ft. of 6 and 8-in. pipe; cost \$7,000.

Wichita, Kan.—City is considering construction of vit. pipe sewer in sewer district No. 15; will require pumping station and inverted syphon; cost \$40,000.—Bert C. Wells, City Engineer.

Lexington, Ky.—Mayor Skaln has opened bids on \$25,000 sewer bond issue; highest and best bidder was declared to be O'Connor & Kahler, of New York, who offered a premium of \$1,069.75 in addition to accrued interest since date of bonds, December 1, 1908.

Lexington, Ky.—Council has passed ordinances calling for sewers on West 5th st. and Bourbon ave.

Winchester, Ky.—Citizens will vote in November on \$65,000 bonds for sewer construction.

Lake Charles, La.—Sewerage Board has announced selection of William B. Kirkpatrick, of Jackson, Miss., to prepare plans, specifications and estimates of costs for the Lake Charles sewerage system.

Mansfield, La.—Private company will be formed to install sewerage and water works systems; cost \$90,000.

Holyoke, Mass.—Board of Public Works is considering laying main sewer in Jackson st.

North Attleboro, Mass.—City has awarded \$122,000 sewer bonds to N. W. Harris & Co.

Coldwater, Mich.—Council is considering petition asking that sanitary sewer system be extended on North Clay st.

Kalamazoo, Mich.—City is considering plans for construction of sanitary sewer in health zone.

Litchfield, Minn.—Plans will be prepared by Oscar Claussen, Engineer, St. Paul, for sanitary sewer system.

Northfield, Minn.—City is considering construction of sewer on Washington st.

Worthington, Minn.—Citizens will soon vote on bonds for extension of its sewer system to include septic tanks.

Joplin, Mo.—Citizens have voted \$50,000 sewer bonds.

St. Louis, Mo.—Board of Public Improvements is urging bond issue for building proposed sewer to carry foul water from River des Peres.

Alliance, Neb.—All bids opened Oct. 13 for proposed sewage disposal plant have been rejected as being too high; bids received were: Intermountain Bridge & Construction Co., Tecumseh, \$9,281, and John Pederson, Alliance, \$9,362.—Wm. Grant, Lincoln, Engineer; F. W. Irish, City Clerk.

Maywood, N. J.—Council is considering installation of sewer system; cost about \$25,000; committee will award contract for drawing map from which sewer system can be outlined.

Perth Amboy, N. J.—Council has passed

final reading ordinance for sewer in Hall st.; construction of sewers in Pearl pl., William, Lewis and High sts. is being considered.

Niagara Falls, N. Y.—City proposes to construct about 2,600 ft. 10 to 15-in. tile sewer, and 1,200 ft. rock tunnels with shafts; cost about \$45,000.—R. A. McClanahan, City Engineer.

Sayre, N. Y.—Borough is considering construction of sewage disposal plant.

Sea Cliff, L. I., N. Y.—City is considering construction of sewerage system; engineer has been appointed to make investigations.

Tonawanda, N. Y.—Board of Public Works rejected bids for construction of sewers in Highland Park and Fuller aves.—J. H. Vickers, Clerk.

Woodside, L. I., N. Y.—Bids have been asked for construction of sewage pumping station, and the laying of about 3,000 ft. of 10-in. c. i. pressure main, and about 900 ft. of 15-in. vit. sewer pipe.—Woodside Heights Land Corporation, 1123 Broadway, New York.

Sanford, N. C.—City will take up matter of sewer system in spring.—J. D. Gunter, Sr., City Clerk.

Fargo, N. D.—Council has decided to build trunk sewer in 10th st. and 3d ave.

Akron, O.—Service Board has ordered construction of storm sewer on Perkin st.

Cincinnati, O.—City is considering sewerage of Knox st., also construction of sewer in ravine bet. Seegar ave. and Blaine rd.

Dayton, O.—Bids will be received Nov. 15, noon, for \$14,000 bonds for construction of sewer in Richmond st.—Edw. Phillips, City Auditor.

Elyria, O.—Preliminary plans are being prepared by Engineer C. H. Lawrence for one mile of 6, 8 and 10-in. vit. pipe sewer on W. River st.—O. E. Haserodt, Lorain County Commissioner.

Louisville, O.—Bids will be received Nov. 15 for \$32,000 sewer and sewage disposal bonds.—Harry L. Rabrassier Village Clerk.

Niles, O.—State Board of Health has allowed city one year to install sewage disposal plant.

Salem, O.—Bids will soon be received by Board of Public Service for constructing 2,975 lin. ft. of 8 and 10-in. vit. sewer on Arch, New Garden and Walnut sts.—B. M. French, City Engineer.

Steubenville, O.—Council has adopted resolution for constructing sewer on Center ave.—Wm. M. Trainer, Clerk.

Toledo, O.—Council has decided to construct local sewer No. 1089.—J. M. Babcock, Clerk.

Youngstown, O.—Council has decided to construct sewer on Penn ave.; also to issue bonds for repair of Mahoning ave. sewer.

Madill, Okla.—Citizens have voted \$20,000 bonds for construction of sewer system.

Oklahoma City, Okla.—Bids will soon be asked for construction of storm and sanitary sewers; cost \$60,000 and \$40,000 respectively.

Hood River, Ore.—City will install sewers in all portions of city not now provided with same.

Klamath Falls, Ore.—City has postponed proposed sewer work till spring.

Portland, Ore.—Estimates are being made for sewer system that will follow along Sullivan's Gulch; cost about \$3,500,000.

Altoona, Pa.—Council has ordered construction of sewer in 22d ave.

Lewistown, Pa.—Council has passed ordinance to provide \$5,000 loan for extending sewer on South Main st.—R. T. Hughes, Secretary.

McKeesport, Pa.—Bids will be received Nov. 4, 4 P.M., for complete design for sewer system and sewage disposal plant with estimated cost in detail of same.—C. E. Soles, City Controller.

South Bethlehem, Pa.—Council has ordered issuance of \$58,500 bonds; at least \$12,250 will be spent on sewers.—Thos. Ganey, Borough Secretary.

Wilkes-Barre, Pa.—City will be forced, within next three years, to abandon its natural sewer, the Susquehanna River, and erect sewage disposal plant.

Bristol, Tenn.—Council has ordered sewer built on Water st.

Nashville, Tenn.—Citizens have voted \$500,000 bonds for construction of trunk sewers throughout city.

Provo, Utah.—Council is considering resolution creating sewer district No. 12; cost \$70,000.—E. A. Jacobs, City Engineer.

Tacoma, Wash.—Council has passed ordinance providing for construction of sanitary sewer in District No. 161.

Milwaukee, Wis.—City is planning new sewerage system, designed to relieve conditions in Menomonee Valley.—C. J. Poetsch, City Engineer.

Racine, Wis.—Council has adopted plans for overflow sewer in Carlisle ave.; also for outfall sewer in English st.

Wausau, Wis.—Council has adopted ordinance to issue \$15,000 sewer bonds.

Ciudad Juarez, Mex.—President Diaz has announced that he would install sewer system in this city.

BIDS RECEIVED AND CONTRACTS AWARDED

Camden, Ark.—The Commissioners of Fourth Improvement District have awarded contract to the Poncey Paving and Construction Co., Helena, for building of new sewer for \$5,530.

Oakland, Cal.—Louis Lima & Co. have been awarded contract for constructing sewer in 14th ave. at the following prices: Furnishing and laying 8-in. pipe, at 74c. per lin. ft.; furnishing and laying "Y" branches, at 50c. each extra; constructing brick manhole, with cover, complete, \$43 each; lamphole, complete, with cover, \$10.—Frank R. Thompson, City Clerk.

San Bernardino, Cal.—The Board of Water Commissioners awarded contracts for 2,080 ft. of drain pipe for the Antil pumping station tract to the George M. Cooley Co., city, which underbid the two other bidders; the bids were as follows: For 10-in. pipe: George M. Cooley Co., 15½c.; Ross & Merry, 18½c.; Johnson-Shea Co., Riverside, 20½c.; 12-in. pipe: George M. Cooley Co., 19½c.; Johnson-Shea Co., 26c.; all bids f. o. b. San Bernardino.

Caldwell, Ida.—After landing a sewer contract for approximately \$60,000, Michael O'Connor, Superintendent of the James Kennedy Construction Co., returned to Salt Lake City, Utah; the sewer will be about nine miles in length.

Joliet, Ill.—Contract for construction of Illinois st. sewer has been awarded to Sandford & Mitchell.

Vincennes, Ind.—Robert E. Lind, Engineer and Superintendent of construction of drainage system petitioned for by J. W. Hill et al, has awarded contract for construction work to Robert L. Clodfelter, of Sandborn. Contract price of the work is \$1,675, which is \$128.61 below the estimated cost, \$1,803.61.

Boone, Ia.—A. T. Gary, Denison, has been awarded contract by city for sewer work at \$55,000.

Cedar Rapids, Ia.—Dearborn & Jackson have secured contract for constructing a sanitary sewer in Young's Hill District, for \$39,574; bids opened Oct. 13.

Boston, Mass.—Bids were opened Oct. 12 for constructing concrete surface drain and appurtenances in Brookline ave., Roxbury, and the contract has been awarded to Andrew M. Cusack, 95 Milk st., for \$8,267. Contract for sewers in Porter st., between Frankfort and Cottage sts., East Boston, has been awarded to P. W. Hill, Old South Bldg., for \$14,074.—Guy Emerson, Superintendent Streets.

Florence, Neb.—F. D. Leach was awarded the contract for the Main st. sewer by Council.

Camden, N. J.—The Street Committee of Council has awarded contracts for constructing sewers to Aaron Ward; for the Central ave. sewer the bidders were B. F. Sweeten & Son, 81c. per lin. ft.; William W. Mines, 80c.; Aaron Ward, 73c. For the Penn st. sewer, the bidders were W. W. Mines, \$1.03 per lin. ft.; B. F. Sweeten & Son, 81c.; Aaron Ward, 81c. Sixth st. from Erie north the bidders were B. F. Sweeten, 81c. per lin. ft.; W. W. Mines, 80c.; Aaron Ward, 81c. For the 28th st. sewer the bidders were W. W. Mines, \$1.25 per lin. ft.; B. F. Sweeten & Son, \$1.31. The contract was awarded to W. W. Mines.

Perth Amboy, N. J.—Four bids were received for constructing a sewer in Sutton st.; from Meagher & Smith, Liddle & Pfeiffer, Johan Jensen and Martin Hansen; the contract was awarded to Meagher & Smith, the lowest bidders.

Rahway, N. J.—Contract for constructing two pipe sewers on East Milton ave. has been awarded to Louis Jacques, of Elizabeth, for \$6,095.—Chas. H. Lambert, City Clerk.

Batavia, N. Y.—Contract for the construction of sewerage system was awarded Thomas M. Sweeny Co., of Pittsburg.

Kingston, N. Y.—Bids were received as follows on Sept. 28 by Board of Water Supply, New York, for the construction of an intercepting sewer at Kingston. Bids in detail were as follows: King, Rice & Ganey Co., 280 Broadway, New York; (B) W. J. Gawne, Cleveland, Ohio; (C) Foye-Root Co., 20 Broad st., New York; (D) Fred T. Ley & Co., Inc., 29 Broadway, New York and Springfield, Mass.; (E) Haggerty Contracting Co., 2459 Davidson ave., New York:

	(A)	(B)	(C)	(D)	(E)
60 lin. ft. shafts in earth.....	\$60.00	\$125.00	\$50.00	\$28.00	\$193.50
160 lin. ft. shafts in rock.....	70.00	160.00	105.00	30.00	200.00
6,000 lin. ft. tunnel in rock.....	15.00	15.00	21.00	27.50	27.00
200 lin. ft. tunnel in earth.....	40.00	21.00	25.00	24.00	30.00
5,600 lin. ft. lining of tunnel in solid rock.....	2.25	2.85	2.50	2.20	4.00
600 lin. ft. lining of tunnel in earth and insecure rock.....	14.00	14.00	18.00	10.25	17.00
3,100 cu. yds. earth excavation and refilling trench.....	2.00	1.25	2.00	1.50	1.25
850 cu. yds. rock excavation and refilling trench.....	4.00	4.00	5.50	4.00	4.50
1,300 lin. ft. furnishing and laying 24" vitrified sewer pipe.....	1.00	1.25	2.50	1.60	1.50
12 lin. ft. furnishing and laying 24" c. i. pipe.....	5.00	6.50	7.00	5.00	8.00
50 lin. ft. furnishing and laying 6" vitrified sewer pipe.....	.20	.50	.50	.25	1.00
6 manholes.....	50.00	50.00	125.00	125.00	80.00
70 cu. yds. concrete masonry.....	8.00	8.50	10.00	8.00	15.00
200 lin. ft. trimming in rock tunnel.....	5.00	10.00	3.00	3.00	3.00
Cleaning up (lump sum).....	1.00	300.00	250.00	3,000.00	100.00
Total.....	\$146,631	\$163,858	\$192,134	\$209,862	\$256,236

Pa., for \$252,363. This includes the main sewers, but no additions to the power plant or machinery or disposal beds.

New Brighton, S. I., N. Y.—Bids were received Oct. 11 by George Cromwell, Borough President, for sewer in Bard ave. as follows: Joseph Johnson's Sons, 193 Broadway, W. Brighton, \$84,224; Joseph L. Sigretto, \$84,289; Dominick Bannack, \$88,758; Litchfield Construction Co., 23 Flatbush ave., Brooklyn, \$80,402; Joseph Moore, \$106,809; Merrill Ruckgaber Co., 50 Church st., New York, \$85,255; Rogers & Haggerty, \$92,883.

Newburgh, N. Y.—Bids for construction of three sewers has been reported by Sewer Committee. These sewers are in West Broadway, Cohecton Turnpike, for 225 ft. west from West st.; in Montgomery st. from Broad st. north, 225 ft., and in Liberty st. from Clinton st. north, 125 ft. The bids received were as follows, the totals tabulated being figured at the price per lin. ft., excluding rock, which may or may not be encountered:

	Price	Extra pr.	
	pr. lin. cubic yd.	foot. of rock.	
Harper & Jova.....	\$1.58	\$2.25	\$366.75
Todd Con. Co.....	2.25	4.00	526.25
O'Rourke & Gainey.....	2.10	1.58	480.40
Liberty Street.			
Harper & Jova.....	\$1.95	\$1.95	\$399.88
Todd Con. Co.....	5.00	5.00	550.00
O'Rourke & Gainey.....	4.20	4.20	424.50
Montgomery Street.			
Harper & Jova.....	\$1.38	\$2.25	\$377.65
Todd Con. Co.....	2.25	4.00	626.25
O'Rourke & Gainey.....	1.92	4.20	558.00

All three contracts were awarded to Harper & Jova.

New York, N. Y.—Bids were opened Oct. 11 for furnishing materials and constructing a system of temporary sewers and appurtenances through an easement at the foot of Maple ave. and other streets, Sewer District 5A, and the contract has been awarded to Litchfield Construction Co., at \$80,402.—J. F. Ahearn, Borough President.

Syracuse, N. Y.—As a result of the bidding for the contract of the Intercepting Sewer Commission for the construction of a 12-in. sewer in North West st. between Tracy st. and the Onondaga Creek, John Young will be given the job at \$8,053.48; other bidders were: Samuel Bonn, \$14,157.20; Gaffey & Burns, \$11,330; P. R. Kieley, \$11,236; C. T. Hookway, \$9,994.—Harry J. Hamlin, Secretary.

Cincinnati, O.—The contract for sewerage the ravine west of Torrence road, Madison road and other streets in that territory, was let by the Board of Control to Thomas Maloney, at \$25,966.74; this is about \$6,000 lower than the estimate of City Engineer Sundmaker.

London, O.—Council has awarded contract to William F. Mannagan at \$6,932 for construction of two sewers.

Oklahoma City, Okla.—Bids have been opened on construction of sewers in district between Grand and California aves., and referred to City Engineer for tabulation as follows: J. O. Severn, \$7,800; Stokes & McCreedle, \$6,800; Bouse & Bouse, \$10,400; F. R. Stone, \$9,850; H. B. Derr, \$6,976.

Harrisburg, Pa.—Highway Commissioner Caldwell has opened bids for two sewers and Councils will act upon bids. They were: Fifth st., H. Opperman, \$929; W. H. Lynch, \$1,070; W. H. Opperman, \$1,097; Reel st., H. Opperman, \$869; Lynch, \$930, and W. H. Opperman, \$978.

Galveston, Tex.—Commissioner Lange presented the tabulation by the City Engineer of the bids submitted for the extension of sewer laterals, and his recommending of the acceptance of the bid of Kelso & Vautrin for \$2,226.21 was adopted.

Mt. Vernon, Wash.—Contract for constructing sewer system, bids opened Oct. 13, has been awarded to Stevens & MacNell, of Mt. Vernon, for \$14,464.—J. D. Bowen, City Clerk.

Seattle, Wash.—C. W. Crockett & Co. have secured contract for constructing sewers on Frankel ave. for \$4,458.

Green Bay, Wis.—The Committee on Sewers let contracts for sewers to be awarded as follows: Adams st., Martin Van Oss, 35c. per lin. ft.; Pine st., Van Oss, 40c.; Doty st., Van Oss, 40c.; Stuart st., Ben. Waeryegen, 40c.; Crooks st., Waeryegen, 40c.; Chicago, Van Oss, 40c.; West Walnut st., Waeryegen, 50c.; Shewano ave., Waeryegen, 45c.; Oakland ave., Waeryegen, North Chestnut ave., Waeryegen, 35c.

West Allis, Wis.—Contract for ten miles of sewer drain in West Allis has been let by Council to Green & Sons Co., 84 La Salle st., Chicago, at about \$60,991.

WATER SUPPLY

Carbon Hill, Ala.—Citizens will vote Oct. 30 on \$25,000 water works and electric light bonds.

Colusa, Cal.—City has sold \$50,000 water works bonds to Colusa County Bank.

North Pasadena, Cal.—North Pasadena Land and Water Company has instructed T. D. Allen to prepare plans for tunnel to pierce mountain side in the Arroyo Seco for a distance of 200 ft., in order to secure better water supply; work will be accomplished inside half a year and 400 miners inches of water will be secured; estimated cost between \$2,500 and \$3,000.

Riverside, Cal.—Jurupa Water Co. has been incorporated by Charles H. Ennis, Los Angeles; capital \$150,000.

San Francisco, Cal.—Water Committee of Board of Supervisors and other officials have decided to lay Lake Eleanor proposition before people in the shape of a bond election, to be held between Dec. 22 and 31, of this year; estimate of total cost is in neighborhood of \$43,000,000.

San Francisco, Cal.—Board of Public Works has completed plans for 16 more fire cisterns and will ask Supervisors to appropriate \$90,000 for their construction.

South Pasadena, Cal.—Glendale Consolidated Water Company is preparing to sink wells in north end of Verdugo Canyon and west side of the city will be supplied from wells.

Palisade, Col.—Town Board has decided to extend pipe line from reservoir to the headgate of Crawford Ditch.

Hartford, Conn.—Water Commissioners will prepare statement of cost for installation of high service system in northwestern section of the city.

Wilmington, Del.—Bids will be invited soon for 50 k.w. dynamo, wiring and other necessary material, labor, etc., for a lighting outfit for new filtering plant and reservoir; also for the machinery for washing sand and gravel of filter beds.

Lakeland, Fla.—Citizens will vote Nov. 11 on \$65,000 bonds for extending water works and sewer system and erecting schools.—J. S. Edwards, Mayor.

St. Petersburg, Fla.—City has decided to install water meters in all residences and business houses.

Greenville, Ga.—Citizens have decided to issue bonds for construction of water system.

Macon, Ga.—Charles A. Caldwell, Macon, and Hazelhurst & Anderson, Atlanta, Ga., have presented report to Mayor and City Council for requirements and cost of proposed water works as follows: Requirements, three buildings, power house, administration and filter galleries, centrifugal pumps driven by electricity, set of low pressure pumps for delivering raw water to settling basins, two 5,000,000-gal. high pressure pumps, capable of being augmented by two additional units of same capacity, storage reservoirs over 14,000,000 gallons capacity, elevated tank at reservoir, to be supplied by electrically driven pumps, another tank 135 ft. high, capacity 146,000 gallons; estimated cost \$953,316.31.

Moscow, Idaho.—Council is considering improvement of water works system; work proposed will require about 8,100 ft. of water main.

Carlinville, Ill.—Water Department has asked Council for \$15,000 additional appropriation.

Charleston, Ill.—Council is considering reconstruction of water plant.

Dwight, Ill.—Citizens will vote on extension of water works system.

East Alton, Ill.—Village Trustees are considering construction of water works for private use and for fire protection.

Galesburg, Ill.—Water Committee will recommend to Council that they ask people of city for water works bond issue to be used for rebuilding of city's water plant and for extension of water mains.

Springfield, Ill.—City will expend \$5,000 for extension of galleries at pumping station.

Bettendorf, Ia.—Town has granted Bettendorf Improvement Co. franchise to install water system in its suburb.

Leon, Ia.—Citizens are considering call-

ing of election in March to vote on bonds for water works and sewer system.

Mediapolis, Ia.—Citizens have voted to construct water works.

Hill City, Kan.—Taxpayers are considering installation of water works system.

Lucas, Kan.—City has sold \$30,000 bonds for water works and electric light plant.

Newton, Kan.—Water Board is having plans made for two deep wells, 145 ft. deep.—C. E. Elmore, Chairman.

Mansfield, La.—Private company will be formed to install water works and sewerage systems; cost \$90,000.

Gloucester, Mass.—State Board of Health has recommended extension of water mains.

Duluth, Minn.—Manager L. N. Case has recommended \$100,000 bond issue for construction of 5,000,000-gal. reservoir.

Gilbert, Minn.—City will lay two miles of c. i. water mains.

Holdingford, Minn.—Citizens have voted \$5,000 for installation of water works system.

Red Wing, Minn.—Council has voted \$1,800 for purchase of gasoline engine for water works.

Jackson, Miss.—Water Commissioners have asked Council to provide \$100,000 for construction of filtration plant.

Centraia, Mo.—City will take up matter of constructing water works in short time.—J. C. Stewart, City Clerk.

Herman, Mo.—Plans are being prepared by Fuller Consulting Engineer Co., 721 Olive st., St. Louis, for water works and sewerage system.—Address Mayor Schuck.

Kearney, Neb.—Council has adopted resolution authorizing City Engineer to prepare plans for municipal water works; cost not to exceed \$150,000.

Camden, N. J.—Water Committee has instructed Chief of Department to immediately prepare plans and specifications for installation of an auxiliary water plant for fire and manufacturing purposes, drawing upon Delaware River for needed supply.

Collingswood, N. J.—Citizens have unanimously indorsed every recommendation of Water Committee for the establishing of a municipal water plant; Committees recommended that Council proceed to call for election immediately and for erection of plant and issuing of bonds to be followed by execution of the plans, as drawn by A. D. Rogers, engineer; plans call for an expenditure of \$125,000.

Little Falls, N. Y.—Board of Public Works has ordered pipes purchased for extension of water line on West Main st.

Lockport, N. Y.—Water Board has renewed its fight for better fire protection in milling districts of the First and Second Wards by demanding that Council make loop between Gooding and Mill st. mains; job would cost only \$1,000; Water Board, as a matter of better fire protection, asks that proposition it advanced several months ago to have all city mains cleaned by patent process be approved by Aldermen.

Newburgh, N. Y.—Finance Committee has recommended \$158,000 issue of water improvement bonds as approved by taxpayers on May 20.

Peekskill, N. Y.—Board of Water Commissioners will receive bids Oct. 28, 3 p. m., for construction of high pressure system.—I. W. Reynolds, City Engineer.

Pike, N. Y.—Village has voted to install a gravity water system; cost about \$15,000.

Fargo, N. D.—City has advertised for bids for construction of water mains on Broadway.

Mansfield, O.—Bids will be received Nov. 5 for \$12,000 pumping station and water main bonds.—W. S. Bradford, City Auditor.

Niles, O.—State Board of Health has demanded that city water supply be improved upon and suggested installation of water meters.

Antlers, Okla.—Citizens will vote on bonds for construction of water works system.

Ardmore, Okla.—Mayor Cother, Commissioner Dawson and City Engineer Sayre are visiting points in State to investigate water plants and other municipal improvements.

El Reno, Okla.—Burns & McDonnell, Kansas City, Mo., are preparing estimates for water works.—F. Stackpole, City Clerk.

Sentinel, Okla.—Town has authorized bond issue for purpose of installing system of water works.

Verden, Okla.—City is considering election on \$27,000 water works bonds.

Woodward, Okla.—W. F. Kilburn has prepared plans for extension of water works; \$26,000 is available.

Cottage Grove, Ore.—Council has been petitioned to call election on \$10,000 bonds for installation of gravity system to obtain water from Lang Creek, 18 miles distant, for city.

Portland, Ore.—Water Board has recommended laying of 8-in. water main from

Portland Heights reservoir, south to Fulton Park.

Portland, Ore.—Fire Chief Campbell has recommended purchase of 500 additional fire hydrants.

Harrisburg, Pa.—Water Supply Commission of Pennsylvania has approved following applications for water company charters: Northern Cambria Water Company, Susquehanna Township, Cambria County; Salladsburg Water Company, Salladsburg Borough, Lycoming County; Nippenose Water Company, Nippenose Township, Lycoming County; Gilberton Schuylkill Water Company, Gilberton Borough, Schuylkill County; Girardville Water Company, Girardville Borough, Schuylkill County.

Hazeldell, Pa.—Citizens will vote on proposition of city owning its own water works system.

Pittsburg, Pa.—Bids will be received Oct. 29 for \$384,100 bonds for extensive filtration system and \$350,000 South Side water improvements.—E. S. Morrow, City Comptroller.

Pottstown, Pa.—Water Company will spend \$40,000 on improvements next year, including raising of old reservoir on Washington Hill.

Spangler, Pa.—Northern Cambria Street Railway Company has decided to install water purifying plant at its power house; plant will cost \$2,500.

York, Pa.—Water Committee is considering needs of city in way of additional fire plugs.

Frankinton, S. D.—Bids will be received by Council Oct. 29, 8 p. m., for \$5,500 water works bonds.—T. W. Taubman, Mayor.

Marshall, Tex.—City Commissioners have issued \$35,000 bonds for water works improvement.

Terrell, Tex.—Citizens will vote Nov. 23 on \$10,000 bonds for improvement of water works and lighting systems.

Waxahachie, Tex.—Citizens have voted \$17,000 bonds for improvement of water system.

Ogden, Utah.—Upon recommendation of Water Committee, Council has ordered City Engineer Parker to prepare plans for a 24-in. conduit to be laid from Cold Water Canyon to new reservoir.

Salt Lake City, Utah.—Water Works Committee has recommended laying of 6-in. water main in Third West st.; cost \$1,200.

Christiansburg, Va.—Town will install water works; water will be brought from spring near town; reservoir will be on Childress Hill; plans by Engineer Murphy, of Philadelphia.

Richmond, Va.—E. E. Davis, Superintendent water works, will receive bids Oct. 28 for following: 480 lengths 20-in. cast-iron water pipe, class A, American Water Works Association specifications; 9,000 pounds special castings, 24, 20, 16 and 12-in.; 3 20-in. hub and gate valves, test 150 pounds; 19,000 pounds pig lead.

Brattleboro, Vt.—City will install 53 hydrants.

Ellensburg, Wash.—Citizens will vote on a \$5,000 appropriation for preliminary work on municipal plant.

Montesano, Wash.—Local light and water company will be compelled to replace wooden mains with c. i. pipes.

Prosser, Wash.—Citizens will vote about Jan. 1 on installation of water system; plans by Dunn & Dunn, Seattle; cost \$23,703.02 for wood pipe and \$41,213.81 if iron pipe is used.

Germania, W. Va.—Company has been formed to construct water works system.

Parkersburg, W. Va.—Council has passed ordinance providing for purchase and installation of temporary 2,000,000-gallon pump at water works pumping station; cost \$20,000.—Arthur Geisler, City Engineer.

Wheeling, W. Va.—Board of Control is entertaining idea of selling old water works site at foot of 8th st. and establishing new central works on gas works property.

Oconomowoc, Wis.—City is considering ordinance authorizing \$15,000 bonds for extending water main.

Markdale, Ont., Can.—Ratepayers have voted \$7,000 water works debentures.

Red Deer, Alta, Can.—Ratepayers have passed a by-law to provide \$4,000 for purchase of additional pump at pumping station.

Vancouver, B. C., Can.—Richmond ratepayers have voted to install water system.

Vancouver, B. C., Can.—Cleveland & Ducher, Engineers, city, have prepared plans for supplying several adjoining municipalities with water; cost \$500,000.

Victoria, B. C., Can.—Arthur L. Adams, Civic Water Expert, has presented plans for supplying city with water from Sooke Lake; cost \$2,236,500 and \$1,663,000, respectively.

Weston, Ont., Can.—Town will expend \$57,000 for construction of water works system.—Willis Chipman, Bay st., Toronto, Engineer.

BIDS RECEIVED AND CONTRACTS AWARDED

Longmont, Col.—Contracts for constructing water mains have been awarded as follows: Hendrie & Bolthoff, Denver, 3,000 ft. of 20-in. c. i. pipe; Arthur C. Bent, 52,600 ft. 16, 18, 20 and 30-in. concrete pipe.—George H. Stonex, City Clerk.

Middletown, Conn.—Contract for 4,900 ft. c. i. water main, etc., bids opened Oct. 13, has been awarded to Chas. Millar & Son Co., of Utica, N. Y., for \$11,592.—Henry S. Noble, Superintendent.

Rock Island, Ill.—J. V. Alvord, Consulting Engineer, Chicago, and City Engineer Wallace Treichler have recommended that bid of Pittsburg Filter Manufacturing Co. be accepted for proposed filtration plant, following were bids: American Water Softener Co., standardization cost, \$45,974; as offered, \$67,587. Pittsburg Filter Manufacturing Co., standardization cost, \$16,330; as offered, \$63,700. Fred T. Ley & Co., Inc., standardization cost, \$49,840; as offered, \$67,530. New York Continental Jewel Co., standardization cost, \$53,196; as offered, \$59,590. Roberts Filter Manufacturing Co., standardization cost, \$53,565; as offered, \$59,600. Norwood Engineering Co., standardization cost, \$59,410; as offered, \$70,500. Thos. Lightbody, standardization cost, \$60,625; as offered, \$66,000.

St. John, Kan.—Bids were opened Oct. 12 for water works and an electric light plant, and the contract for constructing same has been awarded to Marshall Bros., of Las Animas, Col., for \$12,025. Contracts for material and machinery were let to various firms.—Burns & McDonnell, of Kansas City, Mo., Engineers; A. O. Seewers, City Clerk.

Vardaman, Miss.—City has awarded contract to O. E. Hanna, of Kosciusko, to drill deep well for water supply.

Valley, Neb.—Contract for constructing an electric light plant and water works has been awarded to the National Co., of South Bend, Ind.

Lodi, N. J.—W. P. Partridge and W. J. Slowe, both local men, have formed a contracting partnership, having been awarded contract by the Council to install a water system, amounting to \$33,418.33.

New York, N. Y.—Following are the totals of bids opened Sept. 22 by Board Water Supply for furnishing and installing two 12,500,000-gal. steam turbo-turbine pumps, two 25-h.p. water tube boilers, and all accessories, at Jerome ave. Pumping station, Borough Bronx: Lord Electric Co., 213 W. 40th st., N. Y. City, \$34,884; Turbine Equipment Co., 30 Church st., N. Y. City, \$38,400; North-Eastern Construction Co., 225 5th ave., N. Y. City, \$38,446; Allis-Chalmers Co., Milwaukee, Wis., \$41,387; D'Oller Engineering Co., 116 Liberty st., N. Y. City, \$41,665; E. Rutzler Co., 404-08 E. 49th st., N. Y. City, \$42,093; Grant Rohrer, 299 Broadway, N. Y. City, \$42,180; Evans, Almirall & Co., 281-83 Water st., N. Y. City, \$44,200.

Bids were opened Oct. 13 by Bureau of Water Supply, Gas & Electricity for furnishing, delivering and laying fire service mains and appurtenances in 17th, 18th, 19th, 20th, 21st and 22d sts. and the lowest bid was that of J. H. Roach, 21 Park Row, for a total of \$87,558, including pipe, hydrants, valves, etc. He bid for 1,190 tons c. i. pipe, \$32.50; 8 tons c. i. special castings, \$70; 23 tons miscellaneous special cast, \$70; 60 lin. ft. 24, 20 and 16-in. pipe, \$1; 18,520 lin. ft. 12 and 8-in. pipe, \$30; 30 lin. ft. 36, 30 and 24-in. l. p. pipe, \$2; 37 lin. ft. 20, 16 and 8-in. l. p. pipe, \$1; 350 lin. ft. 12, 6 and 4-in. l. p. pipe, \$50; 54,000 lbs. wrought iron work, \$3; 15,000 lbs. steel shapes, etc., \$3; 4,700 cu. yds. earth excavation, 65c.; 5 cu. yds. rock excavation, \$5; 30 cu. yds. rock excavation, not blast, \$5; 360 cu. yds. masonry excavation, \$5; 54 cu. yds. brick masonry, \$8; 5 cu. yds. rubble masonry, \$3; 190 cu. yds. concrete masonry, \$5; 500 sq. yds. asphalt paving, concrete base, \$2; 4,860 sq. yds. asphalt pavement, stone block base, \$1.50; 50 sq. yds. granite block pavement, \$1; 1,230 sq. yds. stone block, 50c.; 10 sq. yds. bluestone flag, \$1.50; 50 sq. yds. bluestone flag, 50c.; 20 sq. yds. granolithic sidewalk, \$1.20; 60 lin. ft. stone curb, 10c.; 10 lin. ft. granolithic curb, \$1; 10 M ft. timber, \$50; 10 lin. ft. 12-in. pipe, \$1; 10 lin. ft. 8-in. pipe, \$1; 24 sq. yds. 4-ply waterproof, 50c.; 250 lin. ft. 6-in. drain pipe, 50c.; 50 lin. ft. vit. or c. i. drain pipe, 5-10-in., 50c.; 100 lin. ft. 12-in. or 15-in. vit. sewer pipe, \$1.50; other totals. H. E. Fox, 30 W. 125th st., \$91,524; Atlanta Construction Co., 432 E. 91st st., \$101,942; Foye-Root Co., 60 Wall st., \$123,511; Rodgers & Haggerty, 41 Park Row, \$96,120.

Painted Post, N. Y.—The Village Board has accepted the proposition of Rumsey & Co., of Seneca Falls, to install in the pumping station for the village water works two 20-h.p. Foss engines and two Rumsey pumps for \$2,735; the pumps have a capacity of 350,000 gallons a day each.—

Knight & Hopkins, Rome, Consulting Engineers.

Peekskill, N. Y.—The Board of Water Commissioners, President Horton and Superintendent Roake received bids for the construction of a standpipe for the high pressure system as follows: Tippet & Wood, Phillipsburg, N. J., \$6,407; R. D. Wood & Co., of Philadelphia, Pa., \$6,715; contract was awarded to Tippet & Wood.

Ft. Gibson, Okla.—Bids were opened Oct. 12 for construction of water works from plans of M. A. Earl & Co., of Muskogee, and the contract has been awarded to T. C. Brooks & Sons, of Jackson, Mich., for \$32,795.

Lalain, Tex.—Six bids were opened by the City Commissioners for the sinking of an artesian well to the Trinity sands, estimated at 2,400 ft.; all of them were referred to Water Commissioner Dan F. Sullivan. The city's specifications call for a well of 12-in. bore to the Woodbine second stratum, 10-in. to the Paluxy, 8-in. to the Glen Rose and 6-in. to the Trinity sands; it is estimated that such a well will give easily more than 1,000,000 gallons of water a day. The bidders and their bids were: Lavne & Bowler, of Houston, \$35,000; American Well & Prospecting Co., of Corsicana, by H. G. Johnson, \$29,000; O. L. Witherspoon, of Corsicana, \$21,000; B. J. Harper, \$7.50 per ft., estimated at 2,400 ft., \$18,000; A. J. Harper, with certain reductions in the specifications, \$6 per ft., \$14,400; R. H. Dearing, \$7 per ft., \$16,800. The city is to furnish steam and water for the work, the steam to come from Turtle Creek pumping station and the water to be that from the Gill well for drilling.

Christiansburg, Va.—Bids were opened by John R. Johnson, Chairman Special Water Commission, Oct. 6 for laying complete 1.5 miles of 10-in., 2.4 miles of 8-in., 2.2 miles of 6-in. and short runs of other sizes, and the lowest bid submitted was that of W. E. Sexton, Mineola, N. Y., and W. G. Fritz, Dover, N. J., as follows, all prices including setting valves and fire hydrants and entire installation of pipe lines: 16-in. pipe, 75c. per lin. ft.; 12-in. 50c.; 10-in., 23c.; 8-in., 20c.; 6-in., 16c.; 4-in., 14c.; rock excavation, \$2.90 per cu. yd.; total cost about \$6,640.—Howard Murphy, 426 Walnut st., Philadelphia, Pa., Engineer.

Orange, Va.—City has awarded contract, at \$6 per ft., for boring well in connection with water works improvements to Artesian Well & Supply Co., Providence, R. I., and at \$850 for making surveys, plans and specifications to William Nalle, Culpepper.

Seattle, Wash.—Paul Strenstrup has secured contract for water mains on 10th ave., N. E., for \$3,022.

Park Falls, Wis.—Greene Bros., of Albert Lea, Minn., have secured contract for constructing water works for about \$10,000.

Racine, Wis.—Park Board has let contract to Anderson & Johnson for putting in about 2,000 ft. of water service pipe in Lewis field.—P. H. Connolly, City Engineer.

LIGHTING AND POWER

Carbon Hill, Ala.—Citizens will vote Oct. 30 on \$25,000 bonds for electric light plant and water works.

Globe, Ariz.—Arizona & Eastern Consolidated Mining Co. will construct hydro-electric plant to furnish electricity for operating its properties.

Alameda, Cal.—Great Western Power Co., San Francisco, has submitted a proposition to Council offering to supply electricity to operate the municipal electric light plant for a term of ten years; plan provides for the extension of the transmission line of the company from Richmond to Alameda; cost \$10,000, to be paid by the city.—H. P. Wilson, New York City, Secretary.

Bakersfield, Cal.—The Power, Transit & Light Co. is considering extensive improvements to its plant and equipment within the next year.—Harry A. Jastro, Secretary.

Los Angeles, Cal.—Los Angeles & Mt. Washington Ry. Co. is considering construction of power house; contracts for construction will be placed within two months.

Los Angeles, Cal.—Mayor Geo. Alexander has recommended election on \$3,500,000 bonds for installation of power plants along line of Los Angeles aqueduct.

Oroville, Cal.—Feather River Power and Development Company will erect three power plants on Feather River in Plumas and Butte Counties.—H. O. Logue, Manager.

Sacramento, Cal.—Postal Telegraph Co. has decided to place its wires underground.

Salinas, Cal.—The Monterey County Gas & Electric Co. is considering extension of system to Monterey from Salinas, a distance of about 30 miles; it will supply light to Castroville and furnish power to pumping plants in that locality.—W. H. P. Hill, Monterey, General Manager.

Sisson, Cal.—Surveyors of the Siskiyou Electric Light and Power Company are laying out town preparatory to erecting the poles and lines.

South Pasadena, Cal.—Residents of Bushnell, Electric and La France aves. are urging installation of electric lights.

Ventura, Cal.—Town Board is considering replacing of present lighting system with tungsten lamps.

Denver, Col.—Dam 255 ft. high is to be constructed in Routt County by company of Eastern capitalists known as the Great Northern Irrigation and Power Company; reservoir created by the dam will have capacity of 7,405,200,000 cu. ft. of water; Lafayette M. Hughes, Attorney; George G. Anderson, Consulting Engineer, and E. S. Foote, Resident Engineer.

Pitkin, Col.—Local Independent Mining Company has been granted franchise for installation of electric lighting system.—A. E. Reynolds is interested.

St. Petersburg, Fla.—Ed. T. Lewis, H. W. Platt and W. J. Millikin have decided to install electric light plant.

Atlanta, Ga.—Funds have been secured for proposed "White Way" along Peachtree and Whitehall sts.; \$1,500 is available for extending illuminations along Marietta and Mitchell sts.; flaming arcs and incandescent lights will be used.

Greenville, Ga.—Town has voted to issue bonds for construction of electric light system.

Jefferson, Ga.—E. P. Taylor, Engineer, Athens, will prepare plans for construction of electric light plant for Jefferson Cotton Mills Co. and also for water works and sewer system for town of Jefferson; equipment of the electric plant will include a 75 k.w., 3-phase, 2,000-volt generator direct connected to a 125 h.p. high-speed engine; tungsten lamps of 80 c.p. will be used for street lighting.

Senola, Ga.—Election at which citizens voted to issue \$10,000 bonds for construction of an electric light plant has been pronounced illegal, owing to its not having been properly advertised.

Waycross, Ga.—Citizens have defeated proposition to issue \$45,000 bonds for electric light plant.

Bluffton, Ind.—Council has passed second reading ordinance granting Indiana Lighting Company franchise to enter city with its artificial gas lines under certain restrictions.

Indianapolis, Ind.—The Indiana Motor & Manufacturing Company will receive bids for boilers, motors and a full line of electrical equipment to be installed in factory building in Franklin.—C. B. Riley, 717 East 22d st., city, General Manager.

Bettendorf, Ia.—Town has granted Bettendorf Improvement Company franchise to install lighting system in its suburb.

Boston, Mass.—Boston School Committee has recommended communications of city's Finance Commission, to the Mayor and Legislature on question of installing municipal lighting plants in several sections of city.

Marblehead, Mass.—Town will vote Oct. 29 on appropriation for reconstruction of electric light system.

Marblehead, Mass.—Committee to investigate needs of Marblehead Electric Light & Power Plant recommends town to make appropriation of \$28,000, of which \$13,000 is for additional new equipment and balance for renewal and rearrangement.

Aurora, Minn.—Citizens are urging installation of electric light plant.

Sebek, Minn.—John Konkler is considering installation of electric lighting system.

Carthage, Mo.—Council has urged Kansas Natural Gas Company to increase supply of gas.—K. A. McDowell, Pittsburg, President.

Monett, Mo.—Ordinance granting gas franchise to company represented by Springfield men, who plan to build pipe line and trolley road from Springfield to Carthage, has been passed by Council; bill was immediately signed by Mayor Perry Short.

Savannah, Mo.—Citizens have voted \$7,500 bonds for construction of electric light plant.—R. L. Limerick, City Clerk.

Stevensville, Mont.—Citizens have decided to grant franchise to Missoula Light and Water Co.

Jamestown, N. Y.—Municipal Lighting Commission has adopted resolution recommending purchase of system of Jamestown Lighting and Power Company's private plant for \$90,000 and appropriation of \$30,000 for consolidating it under one roof with the municipal plant.

Beach, N. D.—Citizens are favorable to establishment of electric light plant.

Marietta, O.—Parkersburg, Marietta & Interurban Railway Co. will improve and remodel its power station.

Eugene, Ore.—Northwestern Corporation, successors to the Willamette Valley Company, has purchased electric light plant at Junction City and will soon install a 24-hour service; as soon as transmission line can be built the city will be supplied with light and power from plant at Springfield.

Bedford, Pa.—Bedford Electric Light, Heat & Power Co. is considering installa-

tion of new steam engine of about 250 or 300 h.p.—Wm. Brice, Jr., Manager.

Lancaster, S. C.—Leroy Springs and T. Y. Williams have been granted franchise to light city with 30 arc lamps.

Dahart, Tex.—Dahart Ice & Electric Co. will install 250 h.p. generator and make other improvements; cost \$10,000.—S. E. Killen, Manager.

Fort Worth, Tex.—Plans are complete for brilliant illumination of Main and Houston sts., and contract for increased number of lights will be awarded at once.

Greenville, Tex.—City will issue \$50,000 electric light bonds.

Kingsville, Tex.—Kingsville Ice Co. will install electric light plant in connection with present plant.—H. Delno, Manager.

Salt Lake City, Utah.—A. W. Gallacher, 1434 South Main st., city, has asked for 6 cu. ft. per second of flow of Middle Canyon Creek, in Tooele County, for power purposes; power plant, to produce 500 h.p., will be built.

Colonial Beach, Va.—J. R. Benton, Philadelphia, Pa., and other capitalists will establish electric light plant at Classic Shore in connection with proposed electric railway from Quantico to Colonial Beach.

Martinsville, Va.—Citizens have voted \$25,000 bonds for enlargement of electric plant.—A. S. Gravelly, Council Clerk.

Richmond, Va.—E. W. Trafford, Consulting Engineer, Chamber of Commerce Bldg., has estimated cost of distribution system for 900 arc lamps, poles and wires, based on overhead construction, including an overhead line to the City Hall and near-by public buildings, with entire new equipment, at \$72,000.—E. D. Richardson, Chairman Commission on Water and Electricity.

Morrisville, Vt.—Town will build power line to Stowe; cost \$7,000.

Rutland, Vt.—Plans for lighting village of Pittsford with electricity are rapidly developing; work will be begun immediately by Rutland Railway, Light & Power Company; town has already voted appropriation.

Odessa, Wash.—Council has granted franchise to Washington Water Power Company to furnish electricity for lamps and motors.

Seattle, Wash.—City will make effort to induce Seattle Electric Company to extend pipes on Yesler Way as far as new City Hall, in order to furnish heat to that structure.

Spokane, Wash.—Spokane & Inland Railway Company is planning to erect 40 miles of high-tension transmission lines and increase its power plant to 10,000 h.p.

Terra Alta, W. Va.—J. A. Martin, owner of local electric light plant, will install new plant.

Wheeling, W. Va.—W. A. Baehr has notified Council that \$110,000 now available is sufficient to make all necessary improvement to gas works.

Wheeling, W. Va.—Mountain State Electric Co., 915 Market st., will rebuild plant recently destroyed by fire.

Nanton, Alta., Can.—Citizens have voted to appropriate \$16,000 for construction of an electric light plant.—A. S. Thurber, Engineer.

BIDS RECEIVED AND CONTRACTS AWARDED

Detroit, Minn.—City has awarded the following contracts for improving the electric light plant and water works from plans of L. P. Wolf, Engineer, St. Paul, Minn.: Electric equipment to Western Electric Co., Minneapolis, at \$11,628; steam power to Minneapolis Steel & Machinery Co., \$7,825; pumping plant to Fairbanks, Morse & Co., St. Paul, at \$3,700. Bids were opened on Oct. 5.

Nashua, Minn.—The Village Council has awarded a contract for a 9x9 Locomotive simple automatic engine, directly coupled with a Burke three-wire 110-220-volt direct current generator; three bids were received, Fairbanks-Morse Co., Minneapolis Steel & Machinery Co. and the Richardson Electric Co., the latter being awarded the contract for \$1,970, which includes the installation of foundations for the generating set, steam pipe connections, generator connections and marble switchboard, with instruments, and the contract or guarantees to deliver and install the machinery within ten weeks.

Plattsburgh, N. Y.—A contract has been awarded the Nebraska Lighting Co., city, to light the city for a term of five years. Sixty electric lights are to be placed in the residence portion of the city at an expense of \$17 each, and eighteen gas lamps are to light the streets and avenues at an expense of \$28 each, making a total of \$1,524 per year. The city has been without artificial light since April 1, 1902.—Charles C. Parmele, President of Company.

Clinton, N. Y.—Village Trustees have awarded contract for furnishing electricity for operating the municipal electric light

system to Charles A. Borst, of the Clinton Hematite Ore Mines. Contract is for a term of five years. Prices are as follows: Electricity for 27 arc lamps at \$35 each per year; 20 incandescent street lamps of 32 c. p., at \$15 per lamp per year, and electrical energy for commercial and residential lighting at 8c. per k.w. hour. Mr. Borst will install a plant at once at his mines so as to be ready to furnish electrical energy when the present contract expires next February; village owns the distributing system.

Hudson, N. Y.—Contract for construction of a new power house, coal pockets and trunk conduits at the New York State Training School for Girls has been awarded to John Dyer, Jr., of Albany, at \$50,200.

Springfield, O.—Architect Frank L. Packard, of Columbus, has awarded to J. A. Ross, city, contract for erection of a new plant for Springfield Light, Heat & Power Co.

Philadelphia, Pa.—Following are bids opened Oct. 16 by Bureau of Yards & Docks, Washington, D. C., for alteration in power plant at Naval Home, Philadelphia (each bid contains certain modifications): John W. Danforth Co., 227 Colorado Bldg., Washington, D. C., \$12,919; Edw. Fay & Son, 1521 Ransdell st., Philadelphia, \$12,992; McCay Engineering Co., 9 E. Lexington st., Baltimore, Md., \$17,365; D'Olier Engineering Co., 121 S. 11th st., Philadelphia, \$15,970; Arrow Conductor & Mfg. Co., 196 Orleans st., Chicago, Ill., \$386, lightning conductors only: C. & W. Mfg. Co., 26 Cortlandt st., New York, N. Y., \$19,300.

Lancaster, S. C.—Council has entered into contract with Col. Leroy Springs and T. Y. Williams to furnish electricity for lighting the streets of the city; contract calls for not less than 30 arc lamps, the system to be installed not later than January 1.

Pierre, S. D.—Council has awarded a contract for installation of a 150 h.p. engine and generator in municipal electric light plant and also a 250 h.p. engine and pump for the water works, at a cost of \$20,500.

Stanleyton, Va.—P. H. Trout, Shenandoah Electric Co., Staunton, has contract for erection of electric light plant.

Seattle, Wash.—Four contractors submitted to the Board of Public Works tenders for the new wiring of city poles in the nine districts of Greater Seattle, at an estimated cost of \$100,000.

Green Bay, Wis.—The Committee on Health and Sanitation recommended that bids for the new heating plant for the Isolation Hospital be awarded to B. B. Shine, the lowest bidder; the following are the bids: Joseph Prevot, \$1,100; Martin & Wigman, \$1,050, and B. B. Shine, \$990.

Montreal, Que., Can.—Canadian General Electric Co., Toronto, has been awarded contract for supply of a 500 k.w. steam turbo-generator for the Saraguay Electric Co., of this city.

FIRE EQUIPMENT

Montgomery, Ala.—Council is considering purchase of new hose for fire department.

Stuttgart, Ark.—City is considering purchase of electrically propelled chemical engine.

Los Angeles, Cal.—Architects Hudson & Munsell have prepared plans for erection of two-story addition to engine house.

Oakland, Cal.—City Electrician Babcock has filed with Council his estimates of cost of construction of proposed fire alarm and police telegraph station; cost of the building is placed at \$30,000, electric equipment, light and power \$2,000, metal office fixtures \$2,000, shop equipment \$2,000, fire alarm equipment \$30,000, underground cable \$14,000; total \$80,000.

Oroville, Cal.—Town will organize new fire company.

San Francisco, Cal.—Bureau of Architecture has nearly completed plans for engine house for chemical engine No. 12.

Washington, D. C.—Averill, Hall & Adams are preparing plans for engine house to be erected at Minnesota and Pennsylvania aves.; plans for engine house on G st. have been approved by Municipal Architect Snowden Ashford.

Washington, D. C.—Bids will be received next week for erection of model engine house on 12th st.; \$85,000 is available.—L. D. Dessez, Architect.

Moor City, Fla.—Town is considering purchase of new engine.

Zuber, Fla.—City is considering need of fire equipment.

Decatur, Ill.—Citizens are considering purchase of additional fire apparatus.

Sullivan, Ind.—Town has lost chemical engine, only fire apparatus, by fire.

Clarksville, Ia.—Town will erect fireproof cement fire station and town office in spring.

Oskaloosa, Ia.—Fire Department is considering addition of chemical engine.

Perry, Ia.—Town is considering purchase of chemical fire engine.

Coffeyville, Kan.—Purchasing Committee will secure equipment for protecting municipal buildings.

Baton Rouge, La.—Chief Hugh Waddell has recommended equipment of truck with heavy Sewell standpipe and nozzle.

Gretna, La.—Third Ward will organize another volunteer fire company.

New Orleans, La.—Fire Board is considering franchise of necessary apparatus for three new fire stations.

New Orleans, La.—Council has made provisions for erection of three more engine houses in Sixth Municipal District during present year.

Baltimore, Md.—Roland Park Fire Department is considering purchase of new steamer.

Brunswick, Md.—Better fire protection for town is being considered.

Havre de Grace, Md.—Town Council has given site of town jail and court room for firemen's proposed headquarters.

Pikesville, Md.—Fire Department is considering purchase of additional apparatus.

Lowell, Mass.—Committee on Fire Department has recommended erection of engine house in the Oaklands; committee is also favorable to automobile apparatus.—S. J. Adams, Chairman.

Swampscott, Mass.—Town will vote on appropriation to purchase hook and ladder truck.

Port Huron, Mich.—City is considering erection of fire hall at North Port Huron.—R. D. O'Keefe, Superintendent of Public Works.

Duluth, Minn.—City is considering purchase of motor fire engine.

Marble, Minn.—Volunteer fire company will be organized in near future.

St. Joseph, Mo.—City will purchase site for erection of central fire station.

Omaha, Neb.—Citizens will vote Nov. 2 on \$150,000 bonds for construction of engine houses.—D. B. Butler, City Clerk.

Portsmouth, N. H.—Kittery Point will secure equipment for fire department just organized.

Bloomfield, N. J.—City will install apparatus in Brookdale section.

Mt. Ephraim, N. J.—Fire Department is raising funds for purchase of equipment.

Woodbury, N. J.—Town is considering purchase of \$7,500 fire engine.

Binghamton, N. Y.—City will consider purchase of Chief's automobile.

Geneva, N. Y.—City Property Committee has recommended matter of purchase of new fire truck be placed before taxpayers at special election.

Huntington, N. Y.—Purchase of auto engine is being considered.

Nyack, N. Y.—Fire Board will purchase 450 ft. of water and 250 ft. of chemical hose.

White Plains, N. Y.—Board of Trustees has sold \$25,000 fire department bonds to G. N. Hahn, of New York.

Shelby, N. C.—City has decided to erect fire station.

Braddock, N. D.—City is considering improvement of fire protection.

Larimore, N. D.—Council has authorized purchase of gasoline fire engine.

Columbus, O.—Architects Dawson & Holbrook have prepared plans for erection of \$10,000 engine house at State Fair grounds.

Dayton, O.—City will issue \$6,000 bonds for purchase of fire engine for Jersey st. engine house.—C. P. Floyd, Clerk Council.

Bartlesville, Okla.—Town has \$20,000 available for purchase of equipment for fire department; purchase of aerial truck is also being considered.—Address Mayor Campbell.

Butler, Pa.—Building and Fire Committees have decided to erect proposed central fire station on West North st.

Pittsburg, Pa.—City officials are considering plans to equip six big downtown fire-fighting appliances with motor propelling devices.—Miles S. Humphreys, Chief Engineer.

Scranton, Pa.—Joint Public Safety Committee has favorably considered proposed bond issue for erection of fire house.

South Bethlehem, Pa.—Council has ordered issuance of \$58,500 bonds; \$2,500 of this amount will be used for improving fire alarm system.—Thos. Ganey, Borough Secretary.

Williamsport, Pa.—Council is considering purchase of site in Seventh Ward for fire purposes; 10-ft. 2½-in. suction for No. 3 engine will be purchased.

Woodbury, Pa.—Purchase of auto fire engine has been recommended.

Auburn, R. I.—Local fire company is securing funds for installation of fire alarm system.—F. C. Speck is interested.

Eden Park, R. I.—Funds are being secured for erection of fire station.

Woonsocket, R. I.—Council has appropriated \$15,000 for fire station in Sociat District.

Memphis, Tenn.—City is considering need of additional fire alarm boxes.

Sequachie, Tenn.—Need of fire protection is being considered.

San Angelo, Tex.—Citizens have voted \$15,000 bonds for erection of fire station.

Tacoma, Wash.—McCoy E. Spear and F. A. Ballin will design and superintend construction of fire tug for city.

Williamson, W. Va.—Fire Company will soon be organized and equipment purchased.

Montreal, Can.—City has purchased sites for two fire stations.

Moyle, Alta., Can.—Citizens will purchase modern fire fighting equipment.

Winnipeg, Man., Can.—City will expend \$42,000 in erection of four new fire halls next spring.

BIDS RECEIVED AND CONTRACTS AWARDED

Baltimore, Md.—The city has awarded a contract to R. B. Mason to build a large addition to the engine and truck house on Ann st. near Gough st., to cost about \$8,000.

Lawrence, Mass.—Bids for the new fire house in Ward 5 were opened by the Fire Department Committee Oct. 15, and the bid awarded to A. W. Lang & Co., their bid being \$25,000. The bids were as follows: Beauvais & Dufresne, \$28,712, which would include electrical fixtures; Patrick Guerin, \$25,189; Phil. Holland, \$25,490; E. A. Peabody & Son, \$28,547; W. N. Pike & Son, \$34,986.65; A. W. Lang & Co., \$25,000; Ernest Bourque, \$27,000; P. J. Hennessey, \$25,229.14; Callahan & Schufelt, \$25,866.

Fargo, N. D.—Two bids have been received by Council for furnishing the fire department with an aerial fire truck.

One of these bids was made by the American-La France Company, of Elmira, N. Y., and was presented by agent, Thos. R. Johnson. He offered to furnish the machine for \$4,715, with rubber tires or \$4,485 with the plain wheels.

Seagrave Company, of Columbus, O., offered to furnish the truck for the sum of \$4,500, and each company had a certified check for \$500 with the bids.

Muskogee, Okla.—Bids have been received for various equipment needed for Fire Department as follows: For fire hose there were nine bidders with one local concern, the New State Supply Co., Bert Greer, agent, in the field. All bids were according to the specifications and ranged from \$1 to \$56. For other equipment following bids were received: Seagrave Co., aerial truck, \$5,850; chief's auto and chemical combined, \$2,500; Robertson Co., chief's wagon, \$2,450; combination, \$4,895. Knox Co., fire engine No. 1, \$5,750; No. 2, \$5,555. American-LaFrance Co., aerial truck, \$5,950; engine, \$5,720; No. 2, \$5,460. Ahrens Engine Co., engine No. 1, \$5,800; No. 2, \$5,500. Anderson Co., chief's wagon and combination, \$6,210. Muskogee Auto Co., chief's wagon, \$2,800. W. R. Lantz, carriage works, chief's wagon, \$2,100; hose wagon, \$3,250. Pioneer Motor Co., chief's wagon, \$2,900; combination, \$5,970. Webb Co., combination, \$4,750; chief's wagon, \$3,000.

Gamewell company proposed to place 35 fire alarm boxes and install the system for \$12,890. One other bid was received but the bid failed to carry with it the price, this having evidently been an error on the part of the company.

Monessen, Pa.—Contract was let to M. W. Cheesbrough for the construction of a combination truck wagon for fire fighting purposes; the vehicle will be hauled by horses.

ELECTRIC RAILWAYS

Heber, Ark.—Heber Light & Power Company has completed surveys for construction of its proposed electric railway; length 1½ miles.—W. H. Horton, Secretary.

Pomona, Cal.—Construction of an electric railway from Pomona to Claremont and on to Indian Hill is being considered by business men; proposed railway will be about five miles long.

San Diego, Cal.—San Diego, El Cajon & Escondido Railway Co. has been incorporated to build an electric railway to connect San Diego, La Mesa, El Cajon, Bostonia, Lakeside, Morton, San Pasquel, Bernardo and Escondido, 65 miles distant; capital \$2,500,000.—G. W. Pursell, H. G. Crowe and A. C. Rlordan, San Diego, and W. L. Ramsey, Escondido, incorporators.

San Francisco, Cal.—Peninsular Railway Company has petitioned Council for franchise for electric lines on number of streets.

San Francisco, Cal.—Board of Supervisors has passed to print ordinance calling upon City Engineer for estimate of cost for constructing Geary st. rd. from Kearny st. to the Cliff House and from Kearny to East st.

Santa Monica, Cal.—Tidewater Northern Railway Co. has been incorporated to con-

struct a road from Santa Monica to Ventura.—R. N. Hart, J. S. Wallace and R. H. Barr, Directors.

New Haven, Conn.—Engineers in employ of Connecticut company are planning completion of trolley through Concord st. in rear of the Shoreham Hotel, Morris Cove.

Torrington, Conn.—Company is planning construction of electric line from Torrington to Thomaston.—J. Kelly, Business Men's League, is interested.

Wilmington, Del.—Westchester & Wilmington Electric Railway Co. will start construction on proposed railway between these cities by first of next month.—Thos. E. O'Connell, President.

Lake City, Fla.—Fire Chief Adicks is interested in construction of trolley line between this town and Watertown.

Moline, Ill.—Council has again voted down ordinance granting local street car company franchise on 4th ave.

Mt. Vernon, Ill.—Albert J. Davis, St. Louis, Mo., and associates will build electric railway from Mt. Vernon to Chester; distance \$3 miles.

Peoria, Ill.—Peoria Railway Company will apply for street car franchise for extension of line to Peoria Heights.

Indianapolis, Ind.—Councilman Charles G. Davis has asked Board of Public Works to order extension of street car service in north part of the city; extension will provide cross-town service.

Madison, Ind.—Council and Town Board of Hanover have each granted franchise to the Cincinnati, Madison & Western Traction Co. to construct an electric railway through these places.

Rensselaer, Ind.—Surveys are now being made for locating proposed electric railway to be built by Northwestern & Indiana Traction Company between this city and Lafayette, also branch from Monticello to Logansport.

Iowa City, Ia.—Iowa City and Davenport will be linked by an interurban railway line, beginning in the spring of 1910, if plans of the Iowa City & Davenport Traction Company mature.

Waterloo, Ia.—Iowa Light & Traction Co., Eldora, is considering construction of railway between this city and Des Moines.

Springfield, Mass.—Railroad Commissioners have granted a certificate of operation to street railway company to connect its road with Western Massachusetts Street Railway in West Springfield.

Kansas City, Mo.—City has sent resolution to Metropolitan Street Railway Co. demanding construction of electric line into northeast section of city.

Vineland, N. J.—Northern New York Construction Company has been formed to build a trolley line between here and Bridgeton; Directors elected are: George E. Stevenson; B. F. Patterson, a trolley magnate of New York; G. H. Burgess, Philadelphia; Frank Purvin; H. C. Bartlett, Vineland, and T. H. Coggey, New York.

Auburn, N. Y.—Auburn and Syracuse Electric Railroad Company has petitioned for franchise to extend its East Genesee st. line.

Bath, N. Y.—Construction of electric line between this village and Hornell is being considered.—Mayor Prangen Howell, J. F. Tuerk and others are interested.

New York, N. Y.—Preliminary approval has been given to tentative sketches submitted by Henry B. Seaman, Chief Engineer of Public Service Commission, for elevated structures for rapid transit lines in Greater New York, to be built of steel, with reinforced concrete roadbed and crushed stone ballast; estimated cost \$1,000,000 a mile.

East Liverpool, O.—Franchise will be granted Youngstown & Ohio River Railway Co. to operate cars in this city; must operate by electricity within the limits of city.

Wadsworth, O.—Committee representing Northern Ohio Traction & Light Co. will go over territory between Wadsworth and Seville in near future with view of locating route of spur westward to connect with the Cleveland & Southwestern line; extension will cost \$300,000.

Guthrie, Okla.—Charters for two interurban electric lines have been taken out; one is the Coffeyville & Nowata Railroad and Power Company; company is capitalized at \$200,000, and will traverse distance of 23 miles; incorporators are J. A. Pilloitin, J. P. Venton, W. V. Graves of Nowata, John B. Pollard of Kansas City and W. P. Brown of Coffeyville. Lawton & Fort Sill Electric Railroad Company has also been chartered, capitalized at \$200,000; company proposes operating street line from Lawton to Fort Sill and Medicine Park; incorporators are W. H. Pattie, D. L. Sleeper and J. H. Miller of Tulsa, and J. B. Sleeper of Lawton.

Marshfield, Ore.—Council has approved petition of J. M. Blake for franchise to build an electric railway; citizens will vote on it in December.

Bellefonte, Pa.—Center County Traction Company has been incorporated to build an electric railway from this city to State College, distance 15 miles.—W. C. Hagan, Pittsburg, President; Wm. H. Furey and L. T. Munson, incorporators.

Charleroi, Pa.—The West Side Electric Street Railway has applied for franchise to change the route of its electric railways; line will be extended to Bentleyville.

Dunmore, Pa.—Council has granted franchise to Scranton and Lake Shore Railway Company granting permission to lay tracks along Drinker st.

Harrisburg, Pa.—Center County Traction Co. has been incorporated and proposes construction of a system of lines connecting Bellefonte, Milesburg and State College, Pa.—William C. Hagan, Pittsburg, President; J. C. Meyer, Robert Hunter and L. T. Munson, Bellefonte, and W. M. Furey, Pittsburg, incorporators.

Latrobe, Pa.—Local street railway company will extend its electric railway from this city to the line of Unity and Salem Townships; distance 5½ miles.

Pittsburg, Pa.—West Penn Railways Co. will extend its railway from Hempfield to Mill Grove, West Newton, Gratztown, Sutersville and Blythesdale; distance 15 miles.—J. L. Fritsch, Conneville, Chief Engineer.

Stroudsburg, Pa.—Stroudsburg & Water Gap Trolley Company is considering extension of its line to Saylorsburg and Wind Gap.

Titusville, Pa.—The Titusville Southern R. R. has been chartered, to build a 25-mile line from Titusville to Oil City; capital \$250,000.

Centerville, S. D.—L. F. Phelps, Wagner, is considering construction of interurban line to Viborg; cost \$25,000, length 30 miles.

Memphis, Tenn.—The Memphis Street Railway Co. has applied for franchise to lay track on South 3d st. for a new cross-town line.—E. W. Ford, Superintendent.

Denton, Tex.—Construction will begin soon on an extension of the Denton Street Railway; cost about \$12,000.

Quanah, Tex.—W. R. Du Puy and associates have applied for extension of franchise granting them right to build electric railway in city.

Uvalde, Tex.—Uvalde Street Railway Co. is planning construction of 25-mile line from Uvalde to Batesville.—M. M. McFarland, General Manager.

Quantico, Va.—Philadelphia capitalists have under consideration construction of a modern double-tracked electric road from some point on the Richmond, Fredericksburg & Potomac Railroad near this city to Colonial Beach; distance from the Richmond, Fredericksburg & Potomac Railroad to Beach is 22 miles, and Quantico is nearest point; cost \$250,000.—J. R. Benton, Philadelphia, is interested.

Bellingham, Wash.—Judge E. M. Day is promoting construction of electric line from this place to Lynden.

Seattle, Wash.—Engineers for Seattle, Renton & Southern Railway are surveying for two feed lines to connect with main line on Rainier blvd.; one line is to run on Genessee st. from Rainier blvd. to Lake Washington, and the other, to be constructed on Hudson st., will run from Columbia Station through district to eastward of Beacon Hill.

Walla Walla, Wash.—Walla Walla Valley Traction Company is considering extension of line to Frankland and Brown addition to city.

BIDS RECEIVED AND CONTRACTS AWARDED

Brockport, Ind.—Brockport Traction Co. has awarded contract to Tennis Construction Co., Pittsburg, Pa., for construction of an extension to its railway system to Troy, Tell City and Cannellton.

Des Moines, Ia.—Des Moines & Sioux City Railroad Co. has awarded contract for constructing proposed electric railway from Des Moines to Sioux City, via Adel and Perry, a distance of 196 miles, to the American National Corporation, Indianapolis, Ind. Contract calls for completion by December 30, 1910.

Keyport, N. J.—Jersey Central Traction Co. has awarded contract for constructing an extension through South Amboy to Perth Amboy, 2½ miles, to General Contracting & Engineering Co., 50 Church st., New York, N. Y.—H. C. Todd, Keyport, Chief Engineer.

Westmoreland, Tenn.—Bright Bros. Construction Co., Nashville, Tenn., has contract for building the Westmoreland & Red Bolling Springs Railroad; preliminary survey has been completed and right-of-way is being secured for this line, which will extend from Westmoreland via Lafayette to Red Bolling Springs, Tenn., 36 miles distant, and later into Kentucky, to connect with the Queen & Crescent route.—W. A. Smith, President; A. J. Bright, Lafayette, Chief Engineer.

BRIDGES

West End, Ala.—Citizens will vote on \$6,500 bonds for bridges and culverts.

Batesville, Ark.—Independence County will erect five structures; two will be 80 ft., cost \$1,000 each; one 120 ft., \$3,000; two 100 ft., \$1,500 each.—Lund & Hill, Little Rock, Engineers in charge.

Pine Bluff, Ark.—County Commissioners are considering construction of bridge across Arkansas River.

Pasadena, Cal.—Plans and specifications for both a low and a high bridge to be constructed across Arroyo Seco at end of Colorado st. are to be prepared.

Tehama, Cal.—County Surveyor Luning has selected site for proposed county draw bridge.

Florence, Col.—City will at once construct bridge across Main st.; cost \$5,000.

Washington, D. C.—William M. Johnson, Paul W. Cooper and N. P. Valerius, all of Chicago, Ill., owners Analostan Island, will construct concrete culvert across Little River from Hume st. to Analostan Island.

Jacksonville, Fla.—Plans have been prepared for construction of bridges across Six-Mile and Little Pottsgum Creeks.

Macon, Ga.—Macon Traction Co. has petitioned Council for permission to construct bridge across Okmugee River at 2d st.

Savannah, Ga.—Chatham County will erect steel drawbridge across Turner Creek.

Bloomington, Ill.—McLean County Board of Supervisors and similar Committee from Woodford County are considering erection of large steel bridge over Mackinaw River.—C. C. Hassler, city, County Clerk.

Fulton, Ill.—Town will vote on bonds to erect two bridges over South Ditch in Cattail Drainage District.—J. C. Synder, Supervisor.

South Bend, Ind.—Grand Trunk and Western Railroad will erect bridge over St. Joseph River at Division st.

Des Moines, Ia.—Council has adopted resolution authorizing the City Engineer to draw plans for concrete arch bridge over Des Moines River on Walnut st.—John MacVicar, Superintendent Department of Public Improvements.

Hutchinson, Kan.—Bids will be received for construction of reinforced concrete bridge; cost \$15,000.—G. L. McLane, City Engineer.

Wichita, Kan.—Citizens will vote on \$35,000 bonds for construction of a steel or concrete bridge at 11th st.—Bert C. Wells, City Engineer.

Crowley, La.—Arcadia Parish Police Jury is considering repair of bridge across Bayou Blanc.

Denton, Md.—County Commissioners will rebuild Dover bridge over Choptank River and build macadamized approaches; cost \$32,000.

Coldwater, Mich.—The Union City Milling Co. has been ordered to construct bridge across race on Crane st.

Port Huron, Mich.—Board of Public Works will advertise for bids for construction of culverts for Indian Creek.—R. D. O'Keefe, Superintendent of Public Works.

Meridian, Miss.—Plans are being prepared for concrete bridge on 35th ave. and 7th st. and for bridge on 17th ave. and 6th st.

Great Falls, Mont.—County Commissioners have decided to at once erect five steel bridges on road between Monarch and Neilhart.

Missoula, Mont.—County Commissioners will receive bids Oct. 25 for erection of bridge over Blackfoot River at Bonner.

Hampton, N. J.—Council will ask State Railroad Commission to order Jersey Central Railroad to construct wider bridge across its tracks at Main st.

Paterson, N. J.—Board of Freeholders has unanimously endorsed project for erection of bridge leading from foot of Van Houten st. up to Totowa Hill.

Brooklyn, N. Y.—Bids will be received Oct. 28, 3 p. m., by Park Board, for furnishing all labor and material for erecting bridge at Shore rd. and 1st ave.

Buffalo, N. Y.—Capital for construction of proposed bridge across the Niagara River from Buffalo to Fort Erie has been secured; cost \$1,000,000.—W. M. German, Welland, Ont., is interested.

Minot, N. D.—County Commissioners will construct bridge at Burlington.

Columbus, O.—Columbus Real Estate & Improvement Co. will construct viaduct at intersection of Indianola Park View Drive; plans under way.

Elyria, O.—Plans will be prepared by Engineer C. H. Lawrence for eight or ten steel or concrete bridges, consisting of 18 to 20-ft. spans.—O. E. Haserodt, Lorain County Commissioner.

Toledo, O.—Bids will be opened Dec. 1 for \$300,000 Cherry st. bridge bonds.—Amos McDonnell, City Auditor.

Ardmore, Okla.—Proposed \$200,000 Carter County Bridge bond issue has been approved.

Guthrie, Okla.—City Engineer E. B. Hocker and F. L. Guy, Chief Engineer of Oklahoma Division of Santa Fe, have completed drawing of profiles and plans for viaduct across Santa Fe tracks. Cottonwood River and the Denver, Enid and Gulf right of way west of river.

Philadelphia, Pa.—Mayor Reyburn has recommended construction of bridge across the Reading Railway on line of Westmoreland ave.; cost about \$30,000.

Pittsburg, Pa.—Contracts will soon be let for construction of bridge over Negley Run Hollow, at Meadow st.; structure will be 515 ft. long with 30-ft. roadway and 10-ft. sidewalks on each side; cost \$65,000.

Reading, Pa.—County Court has approved resolutions of County Commissioners authorizing bids for erection of two new county bridges, one at Kempton, over Maiden Creek, and other at Blue Marsh, over Tulpehocken.—A. L. Rhoads, County Controller.

Reading, Pa.—Berks County Commissioners have decided that bridge will be necessary over creek near Wyomissing in spring.

Ware Shoals, S. C.—Greenville, Greenwood & Augusta Railway Co. will erect bridge across Saluda River.—Henry Briggs, Greenville, President.

Centerville, Tenn.—Hickman County will issue \$13,000 bonds for bridge construction.

San Angelo, Tex.—City and Tom Green County will construct bridge across North Concho.

Austin, Tex.—Attorney-General's Department has approved \$12,000 Zavalla County bridge and road bonds.

Houston, Tex.—Attorney-General's Department has approved \$300,000 Harris County bridge and road bonds.

Riverton, Utah.—County Commissioners have approved plans and will ask bids at once for concrete and steel bridge across Jordan River; cost \$5,000.

Salt Lake City, Utah.—Commissioners have approved plans for new concrete or steel bridge to span Jordan River at Riverton; bids will be advertised for work at once; bridge will cost approximately \$5,000.

Portsmouth, Va.—Street Committee is considering erection of new bridge at Swimming Point; also repairs to two other bridges.

Hoquiam, Wash.—Bids have been authorized for construction of bridge at Simpson ave.

Tacoma, Wash.—Council will recommend 80-ft. draw of lift type on Northern Pacific Ry. bridge over Wilton Waterway.

Marquette, Wis.—City is considering construction of new bridge across river between this city and Menominee, Mich.

Racine, Wis.—Council has instructed City Engineer P. H. Connolly to prepare plans and specifications for repairing and replanking Kinzie ave. bridge.

Nanaimo, B. C., Can.—Citizens have voted funds for proposed Bastion bridge.

Winnipeg, Man., Can.—Works Committee has approved plans for Louise bridge and recommendation made to Council that tenders should be called for; cost, including additions to pier, \$120,000.

BIDS RECEIVED AND CONTRACTS AWARDED

Oakland, Cal.—Bids were received for construction of a bridge over the canal and Stephenson & Hoard with a bid of \$1,748, was awarded the contract; other firms bidding were: Scott & Farley, \$2,188; Jorgensen Bros., \$2,751; Cotton Bros., \$2,074; E. W. Doane, \$1,790; T. B. Russell, \$2,097; L. L. Page, \$2,150. Bidders on the Alamo canal bridge were: Scott & Farley, at \$2,745; Stephenson & Hoard, \$2,580; Bruce & Wells, \$2,845; Jorgensen Bros., \$4,272; T. B. Russell, \$2,644, and Cotton Bros., \$2,950; Stephenson & Hoard were awarded the contract.

Galena, Kan.—W. H. O'Bannon, engineer and contractor, of Muskogee, Okla., has been awarded contract for construction of a bridge and by-pass for the Spring River Power Co.; structure is 1,100 ft. long, of reinforced concrete with steel flood gates; contract price, about \$50,000; contract is under name of the A. J. Foster Construction Co., of Joplin, Mo.

Marysville, Kan.—The Board of County Commissioners has awarded contracts to Standard Bridge Co., of Omaha, Neb., for construction of two large steel bridges across the Big Blue River.

Lexington, Ky.—The Central Kentucky Traction Co. has let the contract for the new bridge on Virginia ave. across the Queen & Crescent railroad to the Empire Bridge Co., of Indiana; local representative, George Collins, City National Bank Bldg.

St. Bernard, La.—Nat. Scott has secured the contract to construct 10 steel bridges across Bayou Terra-aux Boeufs for Commissioners of the Bayou Terra-aux Boeufs Drainage District.

Easton, Md.—Fisher & Carozza, Amer-

ican Bldg., Baltimore, are lowest bidders at \$31,278, for construction of pivot draw-bridge across Choptank River; 70-ft. steel span, and grading and macadamizing one-tenth mile of road.

Boston, Mass.—Superintendent of Streets Emerson has awarded a contract to the Boston Bridge Works for repairing the draw span at the Neponset bridge, for \$8,985; William H. Ellis was the only other bidder, at \$9,422.

Monticello, Miss.—Memphis Bridge Co., Memphis, Tenn., has been awarded contract by the county, at \$7,000, for constructing steel bridges across Big Bahala, and steel bridges across Halls Creek for county; also for approaches to steel bridge over Pearl River; bids were opened October 4.

New York, N. Y.—Bids were received as follows, October 11, for furnishing all the labor and materials required for preparing for and building a new steel viaduct between the trolley platform and Jay st., St. George, Borough of Richmond: Snare & Triest Co., 143 Liberty st., \$43,570; McHarg-Barton Co., 165 Broadway, \$51,000; Charles Meade & Co., \$48,770; Pennsylvania Steel Co., 71 Broadway, \$49,968; N. E. Construction Co., 225 5th ave., \$46,500; Cooper & Evans, 221 Broadway, \$46,736; Merrill-Ruckgaber Co., 50 Church st., \$47,400; Grant Reamer, \$46,200.—A. N. Spooner, Commissioner of Docks.

Oneida, N. Y.—Contract for building bridge at Kenwood will be awarded by Board of Public Works and Vernon Town Board to Climax Road Machine Co.

Asheville, N. C.—Following are the bids opened October 8 by County Commissioners for construction of a reinforced concrete bridge over French Broad River, connecting Asheville with West Asheville: (a) for bridge 930 ft. long, 24-ft. roadway and 5-ft. walk; (b) bridge 930 ft. long, 30-ft. roadway and 5-ft. sidewalk; (c) bridge 930 ft. long, 30-ft. roadway, 5-ft. sidewalk: C. B. Clark & Co., Baltimore, Md., (a) \$58,530; W. S. Low Eng. Co., Rock Hill, S. C., (a) two bids, \$62,000 and \$64,250, (b) two bids, \$61,150 and \$69,400, (c) two bids, \$63,536 and \$65,536; W. J. Oliver, Knoxville, Tenn., (a) \$63,422, (b) \$70,472, (c) \$67,972; David E. Evans & Co., Baltimore, Md., (a), two bids, \$63,432 and \$64,232, (b), two bids, \$67,950 and \$68,750; W. A. Park, Knoxville, Tenn., (a), two bids, \$66,000 and \$71,000; Nashville Bridge Co., Nashville, Tenn., (a), three bids, \$70,000, \$80,000 and \$100,000; Carolina Eng. Co., Burlington, N. C., (a) \$90,000; S. I. Bean & Co., city, (a) \$95,558; Requarth Eng. Co., Charleston, S. C., (a) \$99,200, (b) \$119,231, (c) \$108,160; L. I. Smith Co., Richmond, Va., (b), two bids, \$60,000 and \$67,000.

Cincinnati, O.—Bids as follows were received and opened October 11 by Board of Public Service for constructing the lift bridge at Mohawk pl.: T. J. P. Brackett, \$40,900; Toledo-Massillon Co., \$42,000; Capital Construction Co., \$40,999; the Mt. Vernon Co., \$48,000; Strobel Steel Construction Co., \$39,900; Pennsylvania Bridge Co., \$42,850; Grainger & Co., \$31,568, and York Bridge Co., \$42,900.

Cleveland, O.—The Logansport, Frankfort & Indianapolis Traction Co., 613 Citizens' Bldg., has let contract to the U. S. Engineering & Construction Co., New York, N. Y., W. E. Mose, Superintendent in Charge of Construction, Hotel Dunn, Logansport, Ind., for the construction of nine bridges between Logansport and Frankfort, Ind.

Hamilton, O.—Board of Public Service has awarded Capital Construction Co., Columbus, the contract to erect South G st. viaduct; company was the lowest bidder on the work; it bid \$12,300.

Steubenville, O.—County Commissioners have awarded contract for superstructure of bridge No. 29, Warren Township, to Canton Bridge Co., on their bid of \$2,065.

Guthrie, Okla.—County Commissioners have awarded contract to N. H. Sturgis, city, for a 240-ft. suspension bridge across the Skeleton River, in Rose Hill Township, at \$3,300.

Stillwater, Okla.—Canton Bridge Co., Canton, O., has been awarded contract, at \$18,000, for the construction of a bridge over Cimarron River at Hohimer Ford, near Yale.

Pottsville, Pa.—Nolan Bros. have been awarded contract for masonry and approaches for new bridge over the Reading Railroad on Russell st., St. Clair; Pennsylvania Steel Co. has the contract for the superstructure.

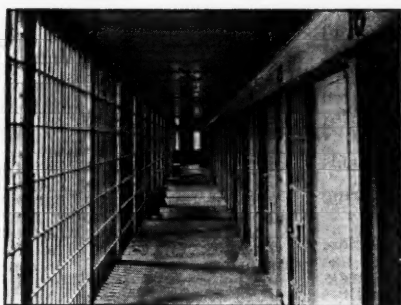
Shelbyville, Tenn.—The Bedford County Commissioners have awarded contract to Nashville Bridge Co. to construct a bridge over Duck River and have appropriated \$5,599.

Bellingham, Wash.—Contract for constructing steel bridge over North Fork of Nooksack River, bids opened October 6, has been awarded to Puget Sound Bridge & Dredging Co., of Seattle, at \$5,410.—Chas. Lindberg, County Engineer.

Hoquiam, Wash.—The contract for the

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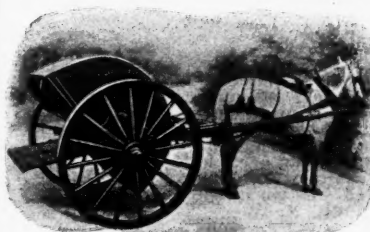
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new steel bridge to be built across the Hoquiam River at 8th st. by the city was awarded to the C. G. Seeley contracting firm of Seattle, for \$65,000. The new structure will be 300 ft. long, driveway 24 ft. wide, and 4-ft. walk. The contract calls for the completion of the bridge by April 18, 1910. The Grays Harbor Construction Co., city, has sub-contract for the concrete and pier work, amounting to \$25,000.

Trent, Wash.—William Oliver, of Spokane, October 5, was awarded contract for the construction of the steel bridge over the river at Trent by the County Commissioners, at \$18,800.

Wheeling, W. Va.—Contract for the erection of superstructure of the new Market st. bridge has been awarded to McClintic-Marshall Contracting Co., of Pittsburg, by Board of Control; company's bid was \$17,000 and was lowest of eight bids submitted; other bids were as follows: American Bridge Co., New York, \$18,995; Riverside Bridge Co., Martins Ferry, O., \$19,344; Massillon Bridge Co., Toledo, O., \$19,750; Penn Bridge Co., Beaver Falls, Pa., \$19,820; Pennsylvania Steel Co., Steelton, Pa., \$20,344; Fort Pitt Bridge Co., Pittsburg, \$25,442; and Ritter Conley Manufacturing Co., Pittsburg, \$27,210.

Green Bay, Wis.—The contract for filling in between the retaining walls of the new Walnut st. bridge was awarded to R. S. Vincent and P. J. Rothe at \$4,266.64; other bids are as follows: Greiling Bros., \$5,333; McGrath Construction Co., \$4,773.

St. Johns, Que., Can.—Contract for construction of Canadian Pacific Railway bridge from this city to Iberville has been let to Quinland & Robertson, Montreal; it will be 1,500 ft. long, double-track, with a draw span in the center.

MISCELLANEOUS

Bessemer, Ala.—Street and Light Committee is considering purchase of street sweeper.

Mobile, Ala.—City is considering extensive improvements to wharfs.—P. J. Lyons, Mayor.

Fort Smith, Ark.—Council has approved movement to give city and county adequate court house and jail facilities; total cost \$70,000.

Los Angeles, Cal.—Mayor George Alexander has sent to Council message recommending that special election be called on \$3,000,000 bonds for harbor improvement.

Los Gatos, Cal.—Board of Trade will estimate cost of establishing two parks, so that bond election may be called.—R. P. Doolan, Chairman Committee.

Martinez, Cal.—Contra Costa and Solano County citizens have united in movement to establish ferry system between Martinez and Benicia.

Wilmington, Del.—Council has taken up matter of erection of new city hall.

Washington, D. C.—Municipal Architect Snowden Ashford has completed plans for two underground convenience stations; also for building for Health Department; bids will be asked in about a week.

Washington, D. C.—On recommendation of J. S. Garland, Assistant Engineer in Water Department, new sanitary drinking fountain is to be erected at southwest corner of Park rd. and 17th st., N. W.

Washington, D. C.—An American consular officer in Latin America reports that two gentlemen have received concession from local government to do certain work in connection with plan of excavating and enlarging a harbor in that region; experts are now on the ground making the plans for the contemplated improvements.—Address No. 4002, Bureau of Manufactures.

Jacksonville, Fla.—Council of Pablo Beach will ask citizens to construct sea wall to protect city; length 20 miles.

Pensacola, Fla.—Board of County Commissioners has accepted Benz plans for the new county jail and will also call for bids for its erection at corner of Jefferson and Zarragossa sts.

Atlanta, Ga.—Plans for beautification of Piedmont Park have been submitted to Park Commission by J. C. Olmsted, Brookline, Mass.

Atlanta, Ga.—City Park Commission will build public comfort station; cost \$25,000.

Chicago, Ill.—Bids will be received Oct. 28 for furnishing and installing pneumatic tubes in City Hall building now being erected.—J. J. Hanberg, Commissioner Public Works.

Winchester, Ky.—Citizens are urging issuance of \$40,000 bonds to erect city hall.

New Orleans, La.—City will appropriate \$35,000 to erect and equip hospital for insane.—Martin Behrman, Mayor.

Livermore Falls, Me.—Town has sold \$39,000 improvement bonds to E. H. Rollins & Sons.

Baltimore, Md.—Second Branch of Council has passed ordinances authorizing the issue of stock, not exceeding \$1,000,000, to supply additional means for construction

and completion of docks and piers planned by the Burnt District Commission.

Baltimore, Md.—Councilman West of the Thirteenth Ward will introduce ordinance in Council for erection in West Park, Hampden, of building for indoor sports.

Baltimore, Md.—Harbor Engineer O. F. Lackey has asked Board of Estimate for \$347,000 appropriation for construction of recreation pier near foot of Broadway.

Beverly, Mass.—Council has appropriated \$2,200 for building sea wall at Queen Park; also decided to purchase plot at Essex and Winter sts. as public library site.

Swampscott, Mass.—Citizens are considering establishment of playgrounds.

Westfield, Mass.—City is considering erection of police building.

Minneapolis, Minn.—Park Board is considering establishment of park on East Side.

Kansas City, Mo.—War Department has approved plans for eight miles of diking, from Broadway east to mouth of Blue River; estimated cost \$1,781,221.59.—S. Waters Fox, Kansas City Life Bldg., Engineer.

Omaha, Neb.—Citizens will vote Nov. 2 on \$50,000 park and \$75,000 public library bonds.—D. B. Butler, City Clerk.

Camden, N. J.—Police Committee has decided to advertise for bids for supplying Police Department with combination patrol and ambulance auto.—Joshua Haines, Chairman.

New York, N. Y.—Bids will be received Oct. 28 for furnishing material and dredging about 200,000 cu. yd. on North River, Borough Manhattan, as per Contract No. 1118.—A. N. Spooner, Commissioner of Docks.

New York, N. Y.—Municipal Art Commission, Robert W. de Forest, President, has approved plans for erection of municipal building, at an estimated cost of \$10,000,000, in the two blocks bounded by Tryon Row, Center st. Duane st. and Park Row.

Rochester, N. Y.—Board of Contract and Supply has returned unopened two bids received for comfort station at Cobbs Hill reservoir.

Warwick, N. D.—Town will erect \$10,000 hall next spring.

Ashtabula, O.—Citizens have voted to issue \$390,000 bonds for improvement of river.

Cincinnati, O.—Park Commission has decided to call election on \$1,000,000 park bonds at earliest possible date.

Liverpool, O.—Board of Health will ask Council to make provision for erection and maintenance of suitable crematory and collection of garbage; total cost \$21,500.

Portland, O.—Executive Board is considering plans for erection of city barr at Lowell and Milwaukee sts.

Muskogee, Okla.—Park Board has asked election on \$25,000 bonds for park improvements.—L. H. Holmes, President.

Oklahoma City, Okla.—Hering and Fuller, Engineers, New York, have been instructed to draw up plans, at a cost of \$500, for an incinerator which will answer purposes of this city.

Pauls Valley, Okla.—Bond election called for purpose of voting bonds to amount of \$200,000 for Court House, jail and bridge has been called off by County Commissioners.

Portland, Ore.—City has sold \$158,000 improvement bonds to Lumberman's National Bank and \$2,000 to Police and Fire Relief Fund.

Philadelphia, Pa.—Councils Committee on Fairmount Park has approved Park Commissioners' estimate for 1910, which includes item of \$300,000 for further extension of the Wissahickon boundaries of the park, making total amount required \$1,195,876.50; another item in the estimate is \$9,000 for repairing and improving Memorial Hall.

Pittsburg, Pa.—Bids will be received Oct. 28, 10 a. m., by Bureau of Highway and Sewer for 30 dump wagons.—J. G. Armstrong, Director Department Public Works.

South Bethlehem, Pa.—Council has ordered issuance of \$58,500 bonds; \$2,500 of this amount will be used for improving police alarm system.—Thos. Ganey, Borough Secretary.

Central Falls, R. I.—Citizens are urging purchase of tract of land between Dexter st. and Lonsdale ave. for park purposes.

Chattanooga, Tenn.—C. A. Bearden is preparing plans for improvements and remodeling of old city hall into police station.

Galveston, Tex.—City is considering election on \$250,000 bonds for seawall improvements.

Salt Lake City, Utah.—Council is considering resolution which has for its aim establishment of special fund for purchase of land for public parks.

Seattle, Wash.—Park Board has voted to condemn 57 acres of land owned by J. W. Clise, to be converted into Magnolia Bluff parkway.

Seattle, Wash.—Council has passed bills appropriating \$2,500 for purchase of auto-

mobiles for Superintendent of Buildings and City Electrician.

Saskatoon, Sask., Can.—Ratepayers have passed by-law to issue \$70,000 subway construction debentures.

BIDS RECEIVED AND CONTRACTS AWARDED

Sacramento, Cal.—Following are bids opened October 5 by the City Trustees for an elevator for City Hall: Van Emmon Elevator Co., \$17,300; Western Elevator Co., \$16,690; Otis Elevator Co., \$16,585; and Finch Jail Building & Elevator Co., \$15,685.

Bristol, Conn.—New York, New Haven & Hartford Railroad Co. has let contract for construction of an under pass at Henry st. to O'Connor & Edwards, New Haven.

New Haven, Conn.—The contract for constructing the inland harbor and wharf construction at Plum Island was awarded to the Mitchell Co., of New York, at \$55,000 for the entire construction.

Pratt, Kan.—The Board of County Commissioners let contracts to the McConnell Plumbing Co., of Pratt, for plumbing and heating, at \$5,946; electric wiring to J. E. Beeler, of Ottawa, at \$1,279; fixtures for Court House and jail to the Bailey-Reynolds Co., of Kansas City, at \$1,552.20, and the additional cells for the jail to the Pauley Jail Building Co., of St. Louis, at \$3,800.

Boston, Mass.—Bids were received by Board of Harbor and Land Commissioners for building oak pile wharf at South Boston flats. Contract has been awarded to L. Robert Kidd Co., of Boston, at \$10,101.

Boston, Mass.—Superintendent of Streets Emerson has awarded contract to John T. Keogh & Bro. for collection of refuse and ashes in Dorchester until February 1 for \$3,000; other bidders were: David N. Biggs, \$3,300; B. E. Grant, \$4,914; Patrick J. Lyons, \$4,500; John J. Looney, \$3,300, and John H. Winslow, \$5,242.

Lawrence, Mass.—The contract for the construction of a concrete retaining wall at the playstead on Lawrence st., so that a skating rink can be provided there in winter, was awarded by the Park Commissioners to William Heinrich for \$1,369; work is to be completed by November 15; other bidders were: Jacob Wagenbach & Son, \$2,149; W. P. & R. J. Rae, \$2,150; Philip Holland, \$1,590.

Brooklyn, N. Y.—Bids were opened October 6 by Wm. H. Edwards, Street Cleaning Commissioner, New York, for removal of snow and ice in Brooklyn Borough, as follows: Form No. 1: (a) removing, (b) piling, (c) rough cleaning: Newman & Holmes, Brooklyn, (a) 16½c., (b) 90c., (c) 95c.; William Bradley, 1 Madison ave., New York, (a) 14.9c., (b) 85c., (c) 95c.; Donlon Contracting Co., Brooklyn, (a) 16c., (b) 75c., (c) 88c.; Norton & Gorman, Brooklyn, (a) 23c., (b) 20c., (c) 50c.; W. DuMarco, Mulberry st., New York, (a) 13½c., (b) 25c., (c) 84c. Form No. 2: (a) removing, (b) piling: Newman & Holmes, Brooklyn, (a) 34.95c., (b) 15c.; William Bradley, (a) 44c., (b) 30c.; also same time and place, for removal of snow and ice in Manhattan and Bronx boroughs, as follows: Form No. 1: (a) removing, (b) piling: William Bradley, 1 Madison ave., (a) 57c., (b) 40c.; W. J. Fitzgerald, 547 West 45th st., (a) 72c., (b) 30c.; Canavan Bros., 518 West 56th st., (a) 58c., (b) 45c. Form No. 2: (a) removing, (b) piling, (c) rough cleaning: William Bradley, (a) 19c., (b) 75c., (c) 90c.; W. T. Fitzgerald, (a) 23½c., (b) 40c., (c) 70c.; Thomas Crimmins Construction Co., 446 East 69th st., (a) 24c., (b) 60c., (c) 80c.; Canavan Bros., 518 West 56th st., (a) 22c., (b) 50c., (c) 75c.

Hamilton, O.—County Commissioners have awarded following contracts:

Stephen Trulock, to construct a concrete steel box culvert on the Tylersville pike, Fairfield Township, for \$219.05.

Thomas Katon, to repair and repaint sundry bridges in Fairfield and Union townships for \$96.88.

John Caldwell, to construct two log brush and stone brakes at the Robert Huston farm, St. Clair townships, along Four Mile Creek, for \$100.50, and a brake at the Elliot farm for \$12.60.

Ironton, O.—Hutinspillar & Sheridan have offered to furnish street signs for the same price, 35c. each, as submitted by the manufacturers, and the Public Service Board will order them from a home firm.

Bristol, Va.—Contract was awarded to the American Seating Co., of Chicago, Eugene H. Reiley, representative, for all 65 benches for seating the court room, its balcony, and the City Council chambers, for \$452; other firms submitting bids were: The Southern Seating Co., Jackson, Tenn.; the Everett-Waddy Co., Richmond; the Caldwell-Sites Co., Bristol; A. S. McNeil & Son, Bristol; the Dooley-Bayless Co., Bristol; the F. T. Blanchard Co., Bristol.

The metal contract was let to the Art Metal Construction Co., of Jamestown, N. Y.; it will provide all the metal fur-